

Impact Statement for License Renewal of Nuclear Plants Supplement 38 Regarding Indian Point Nuclear Generating Unit Nos. 2 and 3, Review Period Ends: 07/09/2018, Contact: William Burton 301-415-6332  
*EIS No. 20180121, Draft Supplement, USACE, NM, Middle Rio Grande Flood Protection Bernalillo to Belen New Mexico Integrated General Reevaluation Report and Supplemental Environmental Impact Statement, Comment Period Ends: 07/23/2018, Contact: Michael D. Porter 505-342-3264*  
*EIS No. 20180122, Draft, NRC, LA, Generic Environmental Impact Statement for License Renewal of Nuclear Plants, Supplement 58, Regarding River Bend Station, Unit 1, Comment Period Ends: 07/23/2018, Contact: David Drucker 301-415-6223*  
*EIS No. 20180123, Draft, FERC, CA, Yuba River Development Project, Comment Period Ends: 07/30/2018, Contact: Alan Mitchnick 202-502-6074*  
*EIS No. 20180124, Draft, USFS, MT, Draft Environmental Impact Statement for the Draft Revised Forest Plan Helena—Lewis and Clark National Forest, Comment Period Ends: 09/06/2018, Contact: Deborah Entwistle 406-495-3774*  
*EIS No. 20180125, Draft Supplement, USACE, WA, Mill Creek Flood Control Project Operations and Maintenance, Comment Period Ends: 07/23/2018, Contact: Benjamin Tice 509-527-7267*  
*EIS No. 20180126, Draft, USACE, FL, Central Everglades Planning Project South Florida Water Management District Section 203 Everglades Agricultural Area Southern Reservoir and Stormwater Treatment Area, Comment Period Ends: 07/24/2018, Contact: Stacie Auvenshine 904-314-7614*  
*EIS No. 20180127, Draft, USFS, WA, Sunrise Vegetation and Fuels Management, Comment Period Ends: 08/09/2018, Contact: Johnny Collin 509-843-4643*  
*EIS No. 20180128, Final, USFS, CO, Steamboat Ski Area Improvements, Review Period Ends: 07/17/2018, Contact: Erica Dickerman 970-870-2185*

#### Amended Notice

Revision to the **Federal Register** Notice published 06/01/2018, extend comment period from 07/24/2018 to 07/31/2018,  
*EIS No. 20180111, Draft, NMFS, NAT, Draft Environmental Impact Statement for Issuing Annual Catch Limits to the Alaska Eskimo Whaling*

Commission for a Subsistence Hunt on Bowhead Whales for the Years 2019 and Beyond, Contact: John Henderschedt, 301-427-8385

Dated: June 5, 2018.

**Rob Tomiak,**

*Director, Office of Federal Activities.*

[FR Doc. 2018-12334 Filed 6-7-18; 8:45 am]

**BILLING CODE 6560-50-P**

#### ENVIRONMENTAL PROTECTION AGENCY

**[EPA-HQ-OAR-2018-0295; FRL-9979-20-OAR]**

**RIN 2060-AT40, 2060-AT39, 2060-AT38, 2060-AT37, 2060-AT36**

#### Response to Clean Air Act Section 126(b) Petitions From Delaware and Maryland

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Notice of proposed action on petitions.

**SUMMARY:** The Environmental Protection Agency (EPA) is proposing to deny four petitions submitted by the state of Delaware and one petition submitted by the state of Maryland under Clean Air Act (CAA or Act) section 126(b). The petitions were submitted between July and November 2016. Each of Delaware's four petitions requested that the EPA make a finding that emissions from individual sources in Pennsylvania or West Virginia are significantly contributing to Delaware's nonattainment of the 2008 and 2015 8-hour ozone national ambient air quality standards (NAAQS). Maryland's petition requested that the EPA make a finding that emissions from 36 electric generating units in Indiana, Kentucky, Ohio, Pennsylvania, and West Virginia are significantly contributing to ozone levels that exceed the 2008 8-hour ozone NAAQS in Maryland, and, therefore, are interfering with nonattainment and maintenance of the 2008 ozone NAAQS. The EPA proposes to deny all five petitions because Delaware and Maryland have not met their burden to demonstrate that the sources emit or would emit in violation of the CAA's "good neighbor" provision (*i.e.*, the petitions have not demonstrated that the sources will significantly contribute to nonattainment or interfere with maintenance of the 2008 or 2015 ozone NAAQS in the petitioning states). The EPA is further proposing to deny the petitions based on the agency's independent analysis that the identified sources do not currently emit and are

not expected to emit pollution in violation of the good neighbor provision for either the 2008 or 2015 ozone NAAQS.

**DATES:** *Comments.* Comments must be received on or before July 23, 2018.

*Public Hearing.* The EPA will hold a public hearing on the proposed action. Details will be announced in a separate **Federal Register** document.

**ADDRESSES:** Submit your comments, identified by Docket ID No. EPA-HQ-OAR-2018-0295, at <http://www.regulations.gov>. Follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from *Regulations.gov*. The EPA may publish any comment received to its public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. The EPA will generally not consider comments or comment contents located outside of the primary submission (*e.g.*, on the Web, Cloud, or other file sharing system). For additional submission methods, the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit <http://www2.epa.gov/dockets/commenting-epa-dockets>.

**FOR FURTHER INFORMATION CONTACT:** Questions concerning this proposed notice should be directed to Mr. Lev Gabrilovich, U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Air Quality Policy Division, Mail Code C539-01, Research Triangle Park, NC 27711, telephone (919) 541-1496; email at [gabrilovich.lev@epa.gov](mailto:gabrilovich.lev@epa.gov).

**SUPPLEMENTARY INFORMATION:** The information in this document is organized as follows:

- I. General Information
- II. Executive Summary of the EPA's Decision on CAA Section 126(b) Petitions From Delaware and Maryland
- III. Background and Legal Authority
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  - D. The CAA Section 126(b) Petitions From Delaware
  - E. The CAA Section 126(b) Petition From Maryland
- IV. The EPA's Proposed Decision on

Delaware's and Maryland's CAA Section 126(b) Petitions

A. The EPA's Approach for Granting or Denying CAA Section 126(b) Petitions Regarding the 2008 and 2015 8-Hour Ozone NAAQS

B. The EPA's Evaluation of Whether the Petitions Are Sufficient To Support a Section 126(b) Finding

C. The EPA's Independent Analysis of the CAA Section 126(b) Petitions

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VII. Statutory Authority

## I. General Information

Throughout this document, wherever "we," "us," or "our" is used, we mean the United States (U.S.) EPA.

*Where can I get a copy of this document and other related information?*

The EPA has established a docket for this action under Docket ID No. EPA-HQ-OAR-2018-0295 (available at <http://www.regulations.gov>). The EPA has made available information related to the proposed action and the public hearing at website: <https://www.epa.gov/ozone-pollution/ozone-national-ambient-air-quality-standards-naaqs-section-126-petitions>.

## II. Executive Summary of the EPA's Decision on CAA Section 126(b) Petitions From Delaware and Maryland

In 2016, the states of Delaware and Maryland submitted a total of five petitions requesting that the EPA make findings pursuant to CAA section 126(b) that emissions from numerous upwind sources significantly contribute to nonattainment and/or interfere with maintenance of the ozone NAAQS in violation of CAA section 110(a)(2)(D)(i)(I), otherwise known as the good neighbor provision. Delaware submitted four petitions, each alleging good neighbor violations related to the 2008 and 2015 ozone NAAQS by individual sources located in Pennsylvania or West Virginia. Maryland submitted a single petition alleging good neighbor violations related to the 2008 ozone NAAQS by 36 electric generating units (EGUs) in five states.

The EPA is evaluating the petitions consistent with the same four-step regional analytic framework that the EPA has used in previous regulatory actions addressing regional interstate ozone transport problems. The EPA is therefore using this framework to evaluate whether the petitions meet the standard to demonstrate under CAA section 126(b) that the sources emit or would emit in violation of the good

neighbor provision based on both current and anticipated future emissions levels. The EPA identifies two bases for denying the petitions. First, the agency's historical approach to evaluating CAA section 126(b) petitions looks to see whether a petition, standing alone, identifies or establishes an analytic basis for the requested CAA section 126(b) finding, and the agency identified several elements of the states' analysis that are considered insufficient to support the states' conclusions. Second, the EPA also can rely on its own independent analyses to evaluate the potential basis for the requested CAA section 126(b) finding. The EPA is, therefore, proposing to find, based on its own analysis, that there are no additional highly cost-effective emissions reductions available at the sources, and, thus, that none of the named sources currently emit or would emit in violation of the good neighbor provision with respect to the relevant ozone NAAQS.

Section III of this notice provides background information regarding the EPA's approach to addressing the interstate transport of ozone under CAA sections 110(a)(2)(D)(i) and 126(b), and provides a summary of the relevant issues raised in Delaware's and Maryland's CAA section 126(b) petitions. Section IV of this notice details the EPA's proposed action to deny these petitions, including explaining the EPA's approach for granting or denying CAA section 126(b) petitions regarding the 2008 and 2015 8-hour ozone NAAQS, identifying technical insufficiencies in the petitions, and explaining the EPA's own analysis evaluating whether the sources named in the petitions emit or would emit in violation of the good neighbor provision for the pertinent NAAQS.

## III. Background and Legal Authority

### A. Ozone and Public Health

Ground-level ozone is not emitted directly into the air, but is a secondary air pollutant created by chemical reactions between nitrogen oxides (NO<sub>x</sub>) and volatile organic compounds (VOCs) in the presence of sunlight. These precursor emissions can be transported downwind directly or, after transformation in the atmosphere, as ozone. As a result, ozone formation, atmospheric residence, and transport can occur on a regional scale (*i.e.*, hundreds of miles). For further discussion of ozone-formation chemistry, interstate transport issues, and health effects, *see* the Cross-State Air Pollution Rule Update for the 2008

Ozone NAAQS (CSAPR Update), 81 FR 74504, 74513–14 (October 26, 2016).

On March 12, 2008, the EPA promulgated a revision to the ozone NAAQS, lowering both the primary and secondary standards to 75 parts per billion (ppb).<sup>1</sup> On October 1, 2015, the EPA revised the ground-level ozone NAAQS to 70 ppb.<sup>2</sup>

### B. Clean Air Act Sections 110 and 126

The statutory authority for this action is provided by CAA sections 126 and 110(a)(2)(D)(i). Section 126(b) of the CAA provides, among other things, that any state or political subdivision may petition the Administrator of the EPA to find that any major source or group of stationary sources in an upwind state emits or would emit any air pollutant in violation of the prohibition of CAA section 110(a)(2)(D)(i).<sup>3</sup> Petitions submitted pursuant to this section are commonly referred to as CAA section 126(b) petitions. Similarly, findings by the Administrator, pursuant to this section, that a source or group of sources emits air pollutants in violation of the CAA section 110(a)(2)(D)(i) prohibition are commonly referred to as CAA section 126(b) findings.

CAA section 126(c) explains the effect of a CAA section 126(b) finding and establishes the conditions under which continued operation of a source subject to such a finding may be permitted. Specifically, CAA section 126(c) provides that it is a violation of section 126 of the Act and of the applicable state implementation plan (SIP): (1) For any major proposed new or modified source subject to a CAA section 126(b) finding to be constructed or operate in violation of the prohibition of CAA section 110(a)(2)(D)(i); or (2) for any major existing source for which such a finding has been made to stay in operation more than 3 months after the date of the finding. The statute, however, also gives the Administrator discretion to permit the continued operation of a source beyond 3 months if the source complies with emissions limitations and compliance schedules provided by the EPA to bring about compliance with the requirements contained in CAA sections 110(a)(2)(D)(i) and 126 as expeditiously as practicable, but in any event no later

<sup>1</sup> See National Ambient Air Quality Standards for Ozone, Final Rule, 73 FR 16436 (March 27, 2008).

<sup>2</sup> See National Ambient Air Quality Standards for Ozone, Final Rule, 80 FR 65292 (October 26, 2015).

<sup>3</sup> The text of CAA section 126 as codified in the U.S. Code cross-references section 110(a)(2)(D)(ii) instead of section 110(a)(2)(D)(i). The courts have confirmed that this is a scrivener's error and the correct cross-reference is to CAA section 110(a)(2)(D)(i). *See Appalachian Power Co. v. EPA*, 249 F.3d 1032, 1040–44 (D.C. Cir. 2001).

than 3 years from the date of the finding. *Id.*

Section 110(a)(2)(D)(i) of the CAA, referred to as the good neighbor provision of the Act, requires states to prohibit certain emissions from in-state sources if such emissions impact the air quality in downwind states. Specifically, CAA sections 110(a)(1) and 110(a)(2)(D)(i)(I) require all states, within 3 years of promulgation of a new or revised NAAQS, to submit SIPs that contain adequate provisions prohibiting any source or other type of emissions activity within the state from emitting any air pollutant in amounts which will contribute significantly to nonattainment in, or interfere with maintenance by, any other state with respect to that NAAQS. As described further in Section III.C, the EPA has developed a number of regional rulemakings to address CAA section 110(a)(2)(D)(i)(I) for the various ozone NAAQS. The EPA's most recent rulemaking, the CSAPR Update, was promulgated to address interstate transport under section 110(a)(2)(D)(i)(I) for the 2008 ozone NAAQS. 81 FR 74504 (October 26, 2016). The EPA notes that the petitions from both states were submitted before the implementation of the emissions budgets promulgated in the CSAPR Update.

### C. The EPA's Historical Approach To Addressing Interstate Transport of Ozone Under the Good Neighbor Provision

Given that formation, atmospheric residence, and transport of ozone occur on a regional scale (*i.e.*, hundreds of miles) over much of the eastern U.S., the EPA has historically addressed interstate transport of ozone pursuant to the good neighbor provision through a series of regional rulemakings focused on the reduction of NO<sub>x</sub> emissions. In developing these rulemakings, the EPA has typically found that downwind states' problems attaining and maintaining the ozone NAAQS result, in part, from the contribution of pollution from multiple upwind sources located in different upwind states.

The EPA has promulgated four regional interstate transport rulemakings that have addressed the good neighbor provision with respect to various ozone NAAQS considering the regional nature of ozone transport. Each of these rulemakings essentially followed the same four-step framework to quantify and implement emissions reductions necessary to address the interstate transport requirements of the good neighbor provision. These steps are:

(1) Identifying downwind air quality problems relative to the ozone NAAQS. The EPA has identified downwind areas with air quality problems (referred to as "receptors") considering monitored ozone data where appropriate and air quality modeling projections to a future compliance year. Pursuant to the opinion in *North Carolina v. EPA*, 531 F.3d 896, 908–911 (D.C. Cir. 2008), the agency identified areas expected to be in nonattainment with the ozone NAAQS and those areas that may struggle to maintain the NAAQS;

(2) determining which upwind states are linked to these identified downwind air quality problems and warrant further analysis to determine whether their emissions violate the good neighbor provision. In the EPA's most recent rulemakings, the EPA identified such upwind states to be those modeled to contribute at or above a threshold equivalent to one percent of the applicable NAAQS.

(3) for states linked to downwind air quality problems, identifying upwind emissions on a statewide basis that will significantly contribute to nonattainment or interfere with maintenance of a standard. In all four of the EPA's prior rulemakings, the EPA apportioned emissions reduction responsibility among multiple upwind states linked to downwind air quality problems using cost- and air quality-based criteria to quantify the amount of a linked upwind state's emissions that must be prohibited pursuant to the good neighbor provision; and

(4) for states that are found to have emissions that significantly contribute to nonattainment or interfere with maintenance of the NAAQS downwind, implementing the necessary emissions reductions within the state. The EPA has done this for its federal implementation plans (FIPs) addressing the good neighbor provision for the ozone NAAQS by requiring affected sources in upwind states to participate in allowance trading programs to achieve the necessary emissions reductions.<sup>4</sup>

The EPA's first such rulemaking, the NO<sub>x</sub> SIP Call, addressed interstate transport with respect to the 1979 ozone NAAQS. 63 FR 57356 (October 27, 1998). The EPA concluded in the NO<sub>x</sub> SIP Call that "[t]he fact that virtually every nonattainment problem is caused by numerous sources over a wide

geographic area is a factor suggesting that the solution to the problem is the implementation over a wide area of controls on many sources, each of which may have a small or unmeasurable ambient impact by itself." 63 FR 57356, 57377 (October 27, 1998). The NO<sub>x</sub> SIP Call promulgated statewide emissions budgets and required upwind states to adopt SIPs that would decrease NO<sub>x</sub> emissions by amounts that would meet these budgets, thereby eliminating the emissions that significantly contribute to nonattainment or interfere with maintenance of the ozone NAAQS in downwind states. The EPA also promulgated a model rule for a regional allowance trading program called the NO<sub>x</sub> Budget Trading Program that states could adopt in their SIPs as a mechanism to achieve some or all of the required emissions reductions. All of the jurisdictions covered by the NO<sub>x</sub> SIP Call ultimately chose to adopt the NO<sub>x</sub> Budget Trading Program into their SIPs. The NO<sub>x</sub> SIP Call was upheld by the U.S. Court of Appeals for the District of Columbia Circuit (D.C. Circuit) in all pertinent respects. *See Michigan v. EPA*, 213 F.3d 663 (2000).

In coordination with the NO<sub>x</sub> SIP Call rulemaking under CAA section 110(a)(2)(D)(i)(I), the EPA also addressed several pending CAA section 126(b) petitions submitted by eight northeastern states regarding the same air quality issues addressed by the NO<sub>x</sub> SIP Call (*i.e.*, interstate ozone transport for the 1979 ozone NAAQS). These CAA section 126(b) petitions asked the EPA to find that ozone emissions from numerous sources located in 22 states and the District of Columbia had adverse air quality impacts on the petitioning downwind states. Based on technical determinations made in the NO<sub>x</sub> SIP Call regarding upwind state impacts on downwind air quality, the EPA in May 1999 made technical determinations regarding the claims in the petitions, but did not at that time make the CAA section 126(b) findings requested by the petitions. 64 FR 28250 (May 25, 1999). In making these technical determinations, the EPA concluded that the NO<sub>x</sub> SIP Call would fully address and remediate the claims raised in these petitions, and that the EPA would therefore not need to take separate action to remedy any potential violations of the CAA section 110(a)(2)(D)(i) prohibition. 64 FR 28252. However, subsequent litigation over the NO<sub>x</sub> SIP Call led the EPA to "de-link" the CAA section 126(b) petition response from the NO<sub>x</sub> SIP Call; the EPA made final CAA section 126(b)

<sup>4</sup> While the EPA has chosen to implement emission reductions through allowance trading programs for states found to have a downwind impact, upwind states can choose to submit a SIP that implements such reductions through other enforceable mechanisms that meets the requirements of the good neighbor provision.

findings for 12 states and the District of Columbia. The EPA found that sources in these states emitted in violation of the prohibition in the good neighbor provision with respect to the 1979 ozone NAAQS based on the affirmative technical determinations made in the May 1999 rulemaking. In order to remedy the violation under CAA section 126(c), the EPA required affected sources in the upwind states to participate in a regional allowance trading program whose requirements were designed to be interchangeable with the requirements of the optional NO<sub>x</sub> Budget Trading Program model rule provided under the NO<sub>x</sub> SIP Call. 65 FR 2674 (January 18, 2000). The EPA's action on these section 126(b) petitions was upheld by the D.C. Circuit. *See Appalachian Power Co. v. EPA*, 249 F.3d 1032 (D.C. Cir. 2001).

The EPA next promulgated the Clean Air Interstate Rule (CAIR) to address interstate transport under the good neighbor provision with respect to the 1997 ozone NAAQS, as well as the 1997 fine particulate matter (PM<sub>2.5</sub>) NAAQS. The EPA adopted the same framework for quantifying the level of states' significant contribution to downwind nonattainment in CAIR as it used in the NO<sub>x</sub> SIP Call, based on the determination in the NO<sub>x</sub> SIP Call that downwind ozone nonattainment is due to the impact of emissions from numerous upwind sources and states. 70 FR 25162, 25172 (May 12, 2005). The EPA explained that "[t]ypically, two or more States contribute transported pollution to a single downwind area, so that the 'collective contribution' is much larger than the contribution of any single State." 70 FR 25186. CAIR included two distinct regulatory processes: (1) A regulation to define significant contribution (*i.e.*, the emissions reduction obligation) under the good neighbor provision and provide for submission of SIPs eliminating that contribution, 70 FR 25162 (May 12, 2005); and (2) a regulation to promulgate, where necessary, FIPs imposing emissions limitations, 71 FR 25328 (April 28, 2006). The FIPs required EGUs in affected states to participate in regional allowance trading programs, which replaced the previous NO<sub>x</sub> Budget Trading Program.

In conjunction with the second CAIR regulation promulgating FIPs, the EPA acted on a CAA section 126(b) petition received from the state of North Carolina on March 19, 2004, seeking a finding that large EGUs located in 13 states were significantly contributing to nonattainment and/or interfering with maintenance of the 1997 ozone NAAQS

and the 1997 PM<sub>2.5</sub> NAAQS in North Carolina. Citing the analyses conducted to support the promulgation of CAIR, the EPA denied North Carolina's CAA section 126(b) petition in full based on a determination that either the named states were not adversely impacting downwind air quality in violation of the good neighbor provision or such impacts were fully remedied by implementation of the emissions reductions required by the CAIR FIPs. 71 FR 25328, 25330 (April 28, 2006).

The D.C. Circuit found that EPA's approach to section 110(a)(2)(D)(i)(I) in CAIR was "fundamentally flawed" in several respects, and the rule was remanded in July 2008 with the instruction that the EPA replace the rule "from the ground up." *North Carolina v. EPA*, 531 F.3d at 929. The decision did not find fault with the EPA's general multi-step framework for addressing interstate ozone transport, but rather concluded the EPA's analysis did not address all elements required by the statute. The EPA's separate action denying North Carolina's CAA section 126(b) petition was not challenged.

On August 8, 2011, the EPA promulgated the Cross-State Air Pollution Rule (CSAPR) to replace CAIR. 76 FR 48208 (August 8, 2011). CSAPR addressed the same ozone and PM<sub>2.5</sub> NAAQS as CAIR and, in addition, addressed interstate transport for the 2006 PM<sub>2.5</sub> NAAQS by requiring 28 states to reduce sulfur dioxide (SO<sub>2</sub>) emissions, annual NO<sub>x</sub> emissions, and/or ozone season NO<sub>x</sub> emissions that would significantly contribute to other states' nonattainment or interfere with other states' abilities to maintain these air quality standards. Consistent with prior determinations made in the NO<sub>x</sub> SIP Call and CAIR, the EPA again found that multiple upwind states contributed to downwind ozone nonattainment. Specifically, the EPA found "that the total 'collective contribution' from upwind sources represents a large portion of PM<sub>2.5</sub> and ozone at downwind locations and that the total amount of transport is composed of the individual contribution from numerous upwind states." 76 FR 48237.

Accordingly, the EPA conducted a regional analysis, calculated emissions budgets for affected states, and required EGUs in these states to participate in new regional allowance trading programs to reduce statewide emissions levels. CSAPR was subject to nearly 4 years of litigation. Ultimately, the Supreme Court upheld the EPA's approach to calculating emissions reduction obligations and apportioning upwind state responsibility under the good neighbor provision, but also held

that the EPA was precluded from requiring more emissions reductions than necessary to address downwind air quality problems, or "over-controlling." *See EPA v. EME Homer City Generation, L.P.*, 134 S. Ct. 1584, 1607–09 (2014).<sup>5</sup>

Most recently, the EPA promulgated the CSAPR Update to address the good neighbor provision requirements for the 2008 ozone NAAQS. 81 FR 74504 (October 26, 2016). The final CSAPR Update built upon previous efforts to address the collective contributions of ozone pollution from 22 states in the eastern U.S. to widespread downwind air quality problems, including the NO<sub>x</sub> SIP Call, CAIR, and the original CSAPR. As was also the case for the previous rulemakings, the EPA identified emissions from large EGUs as significantly contributing and/or interfering with maintenance based on cost and air quality factors. The CSAPR Update finalized EGU NO<sub>x</sub> ozone season emissions budgets for affected states that were developed using uniform control stringency available at a marginal cost of \$1,400 per ton of NO<sub>x</sub> reduced. This level of control stringency represented ozone season NO<sub>x</sub> reductions that could be achieved in the 2017 analytic year, which was relevant to the upcoming 2018 attainment date for moderate ozone nonattainment areas, and included the potential for operating and optimizing existing selective catalytic reduction (SCR) post-combustion controls; installing state-of-the-art NO<sub>x</sub> combustion controls; and shifting generation to existing units with lower NO<sub>x</sub> emissions rates within the same state.

The CSAPR Update finalized enforceable measures necessary to achieve the emission reductions in each state by requiring power plants in covered states to participate in the CSAPR NO<sub>x</sub> Ozone Season Group 2 allowance trading program. The CSAPR trading programs and the EPA's prior emissions trading programs (*e.g.*, the NO<sub>x</sub> Budget Trading Program associated with the NO<sub>x</sub> SIP Call) have provided a proven, cost-effective implementation framework for achieving emissions reductions. In addition to providing environmental certainty (*i.e.*, a cap on regional and statewide emissions), these programs have also provided regulated sources with flexibility when choosing

<sup>5</sup> On remand from the Supreme Court, the D.C. Circuit further affirmed various aspects of the CSAPR, while remanding the rule without vacatur for reconsideration of certain states' emissions budgets, where it found those budgets "over-controlled" emissions beyond what was necessary to address the good neighbor requirement. *EME Homer City Generation, L.P. v. EPA*, 795 F.3d 118 (2015). The EPA addressed the remand in several rulemaking actions in 2016 and 2017.

compliance strategies. This implementation approach was shaped by previous rulemakings and reflects the evolution of these programs in response to court decisions and practical experience gained by states, industry, and the EPA.

In finalizing the CSAPR Update, the EPA determined the rule may only be a partial resolution of the good neighbor obligation for all but one of the states subject to that action, including those addressed in Delaware's and Maryland's petitions (Indiana, Kentucky, Ohio, Pennsylvania, and West Virginia), and that the emissions reductions required by the rule "may not be all that is needed" to address transported emissions.<sup>6</sup> 81 FR 74521–22 (October 26, 2016). The EPA noted that the information available at that time indicated that downwind air quality problems would remain in 2017 after implementation of the CSAPR Update, and that upwind states continued to be linked to those downwind problems at or above the one-percent threshold. However, the EPA could not determine whether, at step three of the four-step framework, the EPA had quantified all emissions reductions that may be considered highly cost effective because the rule did not evaluate non-EGU ozone season NO<sub>x</sub> reductions and further EGU control strategies (*i.e.*, the implementation of new post-combustion controls) that are achievable on timeframes extending beyond 2017 analytic year.

Of particular relevance to this action, the EPA determined in the CSAPR Update that emissions from the states identified in Maryland's petition were linked to maintenance concerns for the 2008 ozone NAAQS in Maryland based on air quality modeling projections to 2017. 81 FR 74538–39. With respect to Delaware, the EPA in the CSAPR Update did not identify any downwind air quality problems in Delaware with respect to the 2008 ozone NAAQS, and, therefore, did not determine that emissions from any of the states identified in the four petitions would be linked to Delaware. The CSAPR Update modeling indicated no monitors in Delaware with a projected average or maximum design value above the level of the 2008 ozone NAAQS in 2017.<sup>7</sup>

For states linked to downwind air quality problems, the EPA in the CSAPR

Update found there were cost-effective emissions reductions that could be achieved within upwind states at a marginal cost of \$1,400 per ton, quantified an emissions budget for each state based on that level of control potential, and required EGUs located within the state, including the sources identified in Maryland and Delaware's petitions, to comply with the EPA's allowance trading program under the CSAPR Update beginning with the 2017 ozone season. The EPA found that these emissions budgets were necessary to achieve the required emissions reductions and mitigate impacts on downwind states' air quality in time for the July 2018 moderate area attainment date for the 2008 ozone NAAQS.

#### *D. The CAA Section 126(b) Petitions From Delaware*

In 2016, the state of Delaware, through the Delaware Department of Natural Resources and Environmental Control (Delaware), submitted four petitions claiming that four individual sources in Pennsylvania and West Virginia significantly contribute to Delaware's nonattainment of the 2008 and 2015 8-hour ozone NAAQS. In particular, Delaware's petitions allege that emissions from the Harrison Power Station (Harrison), the Homer City Generating Station (Homer City), and the Brunner Island Steam Generating Station (Brunner Island) in Pennsylvania, and the Conemaugh Generating Station (Conemaugh) in West Virginia, significantly contribute to exceedances of the 2008 8-hour ozone NAAQS in the state of Delaware. The petitions identify a total of 59 exceedance days in the six ozone seasons between 2010 and 2015. Furthermore, Delaware contends that if the 2015 8-hour ozone NAAQS had been in effect during this period, Delaware would have experienced a total of 113 exceedance days in those ozone seasons. Notably, Harrison is equipped with low NO<sub>x</sub> burners (LNBs), overfire air (OFA), and SCR for control of NO<sub>x</sub> emissions at all three units. Homer City is equipped with LNBs, OFA, and SCR for control of NO<sub>x</sub> emissions at all three units. Conemaugh is equipped with LNBs, close-coupled and separated overfire air (CC/SOFA), and SCR for control of NO<sub>x</sub> emissions at both units. Brunner Island is equipped with LNBs and combustion air controls.

#### *1. Common Arguments in Delaware Petitions*

Each of the Delaware petitions alleges that an individual source significantly contributes to nonattainment of the

2008 and 2015 8-hour ozone NAAQS in Delaware based on two common arguments. First, all four petitions allege that the EPA's modeling conducted in support of the CSAPR Update shows that the states in which these sources are located contribute one percent or more of the 2008 8-hour ozone NAAQS to ozone concentrations in Delaware. Second, all four petitions point to additional modeling for support. The Brunner Island and Harrison petitions cite an August 6, 2015, technical memorandum from Sonoma Technology, Inc. (STI), which describes contribution modeling conducted with respect to Brunner Island. The Conemaugh and Homer City petitions cite October 24, 2016, CAMx modeling documentation. Delaware did not provide the EPA with this documentation. Based on this modeling, the petitions claim that all four sources had modeled contributions above one percent of the 2008 8-hour ozone NAAQS to locations in Delaware on select days during the 2011 ozone season.

All four petitions also contend that the absence of short-term NO<sub>x</sub> emissions limits causes the named sources to significantly contribute to Delaware's nonattainment of the 2008 and 2015 ozone NAAQS. The petitions, therefore, ask the EPA to implement short-term NO<sub>x</sub> emissions limits as a remedy under CAA section 126(c). The petitions identify existing regulatory programs aimed at limiting NO<sub>x</sub> emissions at the sources, but argue that these programs are not effective at preventing emissions from significantly contributing to downwind air quality problems in Delaware. In the case of Brunner Island, Homer City, and Conemaugh, Delaware argues that the Pennsylvania NO<sub>x</sub> reasonable available control technology (RACT) regulation includes a 30-day averaging period for determining emissions rates, which will allow the facilities to emit above the rate limit on specific days while still meeting the 30-day average limit. Furthermore, the state argues that although all four facilities named in Delaware's petitions have been subject to several NO<sub>x</sub> emissions cap-and-trade programs that effectively put a seasonal NO<sub>x</sub> emissions mass cap on the fleet of subject units, the subject units are not required to limit their NO<sub>x</sub> emissions over any particular portion of the ozone season as long as they are able to obtain sufficient NO<sub>x</sub> allowances to cover each unit's actual ozone season NO<sub>x</sub> mass emissions. The state alleges that the sources have been able to attain compliance without having to make any

<sup>6</sup> The EPA determined that the emission reductions required by the CSAPR Update satisfied the full scope of the good neighbor obligation for Tennessee with respect to the 2008 ozone NAAQS. 81 FR 74551–52.

<sup>7</sup> See modeling conducted for purposes of the proposed CSAPR Update in 2015. 80 FR 75706, 75725–726 (December 3, 2015).

significant reductions in their ozone season average NO<sub>x</sub> emissions rates. Delaware also acknowledges that Brunner Island can use natural gas as fuel at all three units, lowering the units' NO<sub>x</sub> emissions, but argues that Brunner Island's ability to also use coal indicates that, without a short-term NO<sub>x</sub> emissions limit, the units will continue to significantly contribute to nonattainment or interfere with maintenance of the ozone NAAQS in Delaware. In the case of Conemaugh, Harrison, and Homer City, Delaware similarly contends that current NO<sub>x</sub> emissions regulations applicable to sources in Pennsylvania and West Virginia do not prevent significant contribution to Delaware's nonattainment of the ozone NAAQS. As indicated in this notice, unlike Brunner Island, these sources all have SCR to control NO<sub>x</sub> emissions. Delaware argues that a review of emissions rates since the SCRs were installed indicates that the SCRs are being turned off or operated at reduced levels of effectiveness in the ozone season. Thus, in Delaware's view, these sources also need a short-term NO<sub>x</sub> emissions limit to incentivize effective and consistent NO<sub>x</sub> control operation. The following sections describe additional information Delaware provided in each specific petition.

## 2. Delaware's Petition Regarding the Harrison Power Station

Delaware's August 8, 2016 CAA section 126(b) petition addresses the Harrison Power Station,<sup>8</sup> identified as a 2,052-megawatt facility located near Haywood, Harrison County, West Virginia, with three coal-fired steam EGUs. To support its petition, Delaware states that, based on the STI modeling, the Harrison Power Station had a modeled impact above one percent of the NAAQS on August 10, 2011. Delaware further states that a review of emissions data indicates that the facility emitted 61.588 tons of NO<sub>x</sub> on that day. Delaware concludes that emissions data indicate that daily ozone season NO<sub>x</sub> emissions from the Harrison Power Station frequently exceed the 61.588 tons/day value that the petition estimated had a significant impact on Delaware's monitors.

Delaware indicates that the Harrison Power Station is subject to operating permit NO<sub>x</sub> emissions rate limits and

has been subject to various NO<sub>x</sub> emissions allowance trading programs, which Delaware asserts put a seasonal NO<sub>x</sub> emissions mass cap on the fleet of subject units. Delaware asserts, however, that these programs do not require the subject units to limit their NO<sub>x</sub> emissions over any particular portion of the ozone season as long as each EGU is able to obtain sufficient NO<sub>x</sub> allowances to balance that unit's actual ozone season NO<sub>x</sub> mass emissions. Delaware further indicates that the Harrison Power Station's owner has submitted a permit amendment to install and operate a refined coal facility to produce lower-emitting coal as fuel for combustion in the Harrison Power Station's coal-fired EGU steam generators. The amendment includes ozone season NO<sub>x</sub> emissions rate limits of 0.20 lb/MMBTU, 30-day average, for each of the three coal-fired EGUs.<sup>9</sup>

According to Delaware, from the 2010 ozone season and beyond, the ozone season average NO<sub>x</sub> emissions rates for each of the three Harrison Power Station coal-fired EGUs were well above what might be expected from coal-fired EGUs with operating SCRs. Delaware contends these existing NO<sub>x</sub> emissions rate limits and seasonal NO<sub>x</sub> mass emissions regulatory requirements have not been sufficient to result in consistently low NO<sub>x</sub> emissions rates from the Harrison Power Station EGUs. Moreover, Delaware claims that emissions data indicate that decisions to operate the SCR NO<sub>x</sub> controls at the Harrison Power Station at reduced levels of effectiveness are made on both a seasonal and daily basis as a result of other EGU operating influences.

## 3. Delaware's Petition Regarding the Homer City Generating Station

Delaware's November 10, 2016, CAA section 126(b) petition cites the Homer City Generating Station,<sup>10</sup> identified as a 2,012-megawatt facility located in Indiana County, Pennsylvania, with three coal-fired steam generators. To support their petition, Delaware states that, based on the STI modeling, the Homer City Generating station had a modeled impact above one percent of the NAAQS on July 18, 2011. Delaware further states that a review of the Homer City Generating Station's emissions data indicates that, on that day, the facility

emitted 38.153 tons of NO<sub>x</sub>. Delaware claims that between 2011 and 2016 the facility exceeded emissions of 38.153 tons/day on multiple days. Thus, Delaware claims that, while weather patterns affect the frequency and magnitude of the impacts that the Homer City Generating Station's NO<sub>x</sub> emissions have on Delaware's air quality, the data provide an indication that the NO<sub>x</sub> emissions from the Homer City Generating Station have historically been at levels sufficient to have a significant impact.

## 4. Delaware's Petition Regarding the Conemaugh Generating Station

Delaware's November 28, 2016, CAA section 126(b) petition cites the Conemaugh Generating Station,<sup>11</sup> identified as a 1,872-megawatt facility located in Indiana County, Pennsylvania, with two coal-fired steam electric generating units. To support its petition, Delaware states that, based on the STI modeling, the Conemaugh Generating Station had a modeled impact above one percent on ten separate days in 2011, which coincided with daily NO<sub>x</sub> mass emissions from Conemaugh ranging between 54.516 and 67.173 tons. Furthermore, Delaware indicated that Delaware monitors were exceeding the 2008 ozone NAAQS on eight of the days in 2011 with alleged significant impacts. Delaware analyzed air parcel trajectories modeled with the Hybrid Single Particle Lagrangian Integrated Trajectory (HYSPLIT) on selected days on which the state alleged it experienced significant impacts from the source. According to Delaware, these trajectories indicating contribution from Conemaugh's NO<sub>x</sub> emissions, which coincided with the STI model's estimated ozone impact events, show that emissions from Conemaugh are significantly contributing to ozone concentrations in Delaware.

## 5. Delaware's Petition Regarding the Brunner Island Electric Steam Station

Delaware's July 7, 2016, CAA section 126(b) petition cites emissions from the Brunner Island Electric Steam Station,<sup>12</sup> a 1,411-megawatt facility located in

<sup>8</sup> See Petition from the state of Delaware under CAA section 126(b) requesting that the EPA find that Harrison Power Station's EGUs are emitting air pollutants in violation of the provisions of CAA section 110(a)(2)(D)(i) of the CAA with respect to the 2008 and the 2015 ozone NAAQS, available in the docket for this action.

<sup>9</sup> Delaware states that as of the preparation of this petition, this permit amendment has not been approved and is therefore not yet in force.

<sup>10</sup> See Petition from the state of Delaware under CAA section 126(b) requesting that the EPA find that Homer City Generating Station's EGUs are emitting air pollutants in violation of the provisions of CAA section 110(a)(2)(D)(i) of the CAA with respect to the 2008 and the 2015 ozone NAAQS, available in the docket for this action.

<sup>11</sup> See Petition from the state of Delaware under CAA section 126(b) requesting that the EPA find that Conemaugh Generating Station's EGUs are emitting air pollutants in violation of the provisions of CAA section 110(a)(2)(D)(i) of the CAA with respect to the 2008 and the 2015 ozone NAAQS, available in the docket for this action.

<sup>12</sup> See Petition from the state of Delaware under CAA section 126(b) requesting that the EPA find that Brunner Island Facility's EGUs are emitting air pollutants in violation of the provisions of section 110(a)(2)(D)(i) of the CAA with respect to the 2008 and the 2015 ozone NAAQS, available in the docket for this action.



York County, Pennsylvania with three tangentially-fired steam boiler EGUs, each equipped with low NO<sub>x</sub> burner technology with closed-coupled/separated over fire air (LNC3) combustion controls.<sup>13</sup>

According to Delaware, a modeling analysis conducted by STI estimated that during the 2011 ozone season the Brunner Island facility's NO<sub>x</sub> emissions had a significant impact on Delaware's ambient ozone on 43 separate days relative to the 2015 8-hour ozone NAAQS of 70 ppb and on 41 separate days relative to the 2008 8-hour ozone NAAQS of 75 ppb. The highest estimated impact was predicted on June 8, 2011, with a modeled impact value of 4.83 ppb. Delaware states that the data also indicate that Brunner Island facility NO<sub>x</sub> emissions contributed at significant levels to ozone NAAQS exceedances in Delaware on 9 of the 15 days in 2011. However, Delaware does not identify which of the identified days were exceedance days or the specific ozone NAAQS exceeded. Delaware also notes that the STI modeling information and Air Markets Program Data (AMPD) emissions data indicate that on September 13, 2011, Brunner Island had a modeled impact on Delaware ozone approximately twice the value identified as the threshold for significant impact (1.41 ppb estimated impact compared to 0.70 ppb for significant impact). According to the petition, this impact was caused by emissions amounting to about half of the facility's recorded peak daily NO<sub>x</sub>, and is an indication that even lower amounts of Brunner Island facility NO<sub>x</sub> mass emissions (compared to the 27.4 tons/day value documented in the EPA's AMPD) may still have significant impact on Delaware's measured ozone levels under certain atmospheric conditions. However, the petition does not identify whether September 13, 2011, was a day that exceeded the 2008 ozone NAAQS.

#### 6. Subsequent Actions and Correspondence Regarding the Delaware Petitions

Subsequent to receiving the petitions, the EPA published final rules extending the statutory deadline for the agency to take final action on all four of Delaware's section 126(b) petitions. Section 126(b) of the Act requires the

EPA to either make a finding or deny a petition within 60 days of receipt of the petition and after holding a public hearing. However, any action taken by the EPA under CAA section 126(b) is subject to the procedural requirements of CAA section 307(d). See CAA section 307(d)(1)(N). This section of the CAA requires the EPA to conduct notice-and-comment rulemaking, including issuance of a notice of proposed action, a period for public comment, and a public hearing before making a final determination whether to make the requested finding. In light of the time required for notice-and-comment rulemaking, CAA section 307(d)(10) provides for a time extension, under certain circumstances, for rulemakings subject to the section 307(d) procedural requirements. In accordance with CAA section 307(d)(10), the EPA determined that the 60-day period for action on Delaware's petitions would be insufficient for the EPA to complete the necessary technical review, develop an adequate proposal, and allow time for notice and comment, including an opportunity for public hearing. Therefore, on August 23, 2016, the EPA published a notice extending the deadline to act on Delaware's Brunner Island petition to March 5, 2017.<sup>14</sup> On September 27, 2016, the EPA published a notice extending the deadline to act on Delaware's Harrison Power Station petition to April 7, 2017.<sup>15</sup> On December 29, 2016, the EPA published a notice extending the deadline to act on Delaware's Homer City petition to July 9, 2017.<sup>16</sup> On January 23, 2017, the EPA published a notice extending the deadline to act on Delaware's Conemaugh petition to August 3, 2017.<sup>17</sup> The notices extending these deadlines can be found in the docket for this rulemaking.

On March 5, 2017, the Chesapeake Bay Foundation (CBF) submitted a letter in support of Delaware's petition regarding Brunner Island. The CBF supports Delaware's argument that emissions from the named coal-fired EGUs significantly contribute to nonattainment and interfere with maintenance of the ozone NAAQS in Delaware. On April 11, 2017, the CBF sent a second letter in support of Delaware's petition regarding Harrison. The CBF supports Delaware's argument that emissions data since 2011 demonstrate that Harrison's operators have either ceased to operate the SCR systems regularly or have chosen to

operate them in a sub-optimal manner. In both letters, the CBF argued that the EPA should implement an emissions rate limit at both facilities based on short averaging periods and indicated that Delaware's proposed remedy would help reduce nitrogen deposition to the Chesapeake Bay watershed, with beneficial effects upon the health of the Bay.

On June 20, 2017, the Midwest Ozone Group (MOG) submitted a letter urging the EPA to deny the Conemaugh petition and asserted that Delaware does not have ozone nonattainment or maintenance problems upon which to base a CAA section 126(b) petition. The MOG contends that Delaware air quality currently meets the 2008 8-hour ozone NAAQS, was projected to attain the standard in 2017<sup>18</sup>, and will continue to improve with the implementation of existing regulatory programs. The MOG also suggests that the EPA cannot grant a CAA section 126(b) petition for the 2015 ozone NAAQS until after the EPA has issued designations for that standard.

The EPA acknowledges receipt of these letters and has made them available in the docket for this action. However, the EPA is not in this action responding directly to these letters. Rather, the EPA encourages interested parties to review this proposal and then submit relevant comments during the public comment period.

#### E. The CAA Section 126(b) Petition From Maryland

On November 16, 2016, the state of Maryland, through the Maryland Department of the Environment, submitted a CAA section 126(b) petition alleging that emissions from 36 EGUs significantly contribute to ozone levels that exceed the 2008 ozone NAAQS in Maryland and therefore interfere with both attainment and maintenance of the NAAQS.<sup>19</sup> These sources are coal-fired EGUs located in Indiana, Kentucky, Ohio, Pennsylvania, and West Virginia, which Maryland notes are states that EPA has already determined are significantly contributing to nonattainment in Maryland under the 2008 ozone NAAQS. Maryland indicates that all of these sources have SCR or

<sup>13</sup> For tangentially-fired boiler types, LNC3 is state of the art control technology. See sections 3.9.2 and 5.2.1 on pages 3–25 and 5–5 of the Integrated Planning Model (IPM) 5.13 documentation for details about combustion controls. The IPM documentation is available at <https://www.epa.gov/airmarkets/power-sector-modeling-platform-v513>.

<sup>14</sup> 81 FR 57461 (August 23, 2016).

<sup>15</sup> 81 FR 66189 (September 27, 2016).

<sup>16</sup> 81 FR 95884 (December 29, 2016).

<sup>17</sup> 82 FR 7595 (January 23, 2017).

<sup>18</sup> Note that the EPA designated certain areas of Delaware nonattainment for the 2008 ozone NAAQS. 77 FR 30088 (May 21, 2012).

<sup>19</sup> See Petition to the United States Environmental Protection Agency Pursuant to Section 126 of the Clean Air Act for Abatement of Emissions from 36 Coal-Fired Electric Generating Units at 19 Plants in Five States that Significantly Contribute to Nonattainment of, and Interfere with Maintenance of, the 2008 Ozone National Ambient Air Quality Standard in the State of Maryland, available in the docket for this action.

Selective Non-Catalytic Reduction (SNCR) to control NO<sub>x</sub> emissions. In addition, Maryland's technical support document discusses modeling conducted by the University of Maryland, which claims to show that ozone concentrations would reduce if these EGUs were to optimize running their SCR and SNCR controls, and provides control optimization modeling scenarios which project the ozone impacts of optimizing emissions controls in 2018. Maryland suggests, by way of using its own state regulation as an example, that optimizing controls means operating controls consistent with technological limitations, manufacturers' specifications, good engineering and maintenance practices, and good air pollution control practices for minimizing emissions.

The petition further alleges that Maryland's proposed remedy—discussed further below—will influence how areas in Maryland and other Mid-Atlantic states are designated under the new 2015 ozone NAAQS. According to Maryland, the proposed remedy, if implemented in 2017, would most likely allow the Baltimore area and the Washington, DC, multi-state area, which includes portions of Maryland, to both be designated attainment for the 2015 ozone NAAQS. The EPA notes that the cover letter of Maryland's petition specifically requests that EPA make a finding “that the 36 electric generating units (EGUs) . . . are emitting pollutants in violation of the provisions of Section 110(a)(2)(D)(i)(I) of the CAA with respect to the 2008 ozone National Ambient Air Quality Standards,” and the petition throughout refers only to the 2008 ozone NAAQS when identifying alleged air quality problems in Maryland and the impacts from upwind sources. Accordingly, while Maryland suggests that its requested remedy for 2008 ozone will assist in achieving attainment of the 2015 ozone NAAQS, the state has not specifically requested that EPA make a finding with respect to the 2015 ozone NAAQS, and, therefore, the EPA is not evaluating the petition for this standard.

Maryland alleges that, although the 36 EGUs have existing post-combustion control mechanisms that should prevent significant contribution, the facilities have either ceased to operate the controls regularly during the ozone season or have chosen to operate them in a sub-optimal manner. Maryland presents an analysis based on 2005–2015 ozone season data to support this contention.<sup>20</sup> Maryland argues that

whether controls are optimally run can be determined by comparing current ozone season average emissions rates to the lowest ozone season average emissions rate after 2005 or after the unit installed SCR or SNCR. Maryland alleges that NO<sub>x</sub> emissions rates at the 36 facilities have increased significantly since the SCR and SNCR installation and initial testing, indicating that these EGUs are not operating their post-combustion controls efficiently on each day of the ozone season.

Maryland also submitted a number of technical memoranda to support its argument. Maryland submitted analyses of control technology optimization for coal-fired EGUs in eastern states, which they contend demonstrate that NO<sub>x</sub> emissions rates at specific EGUs are well above what is considered representative of an EGU running post-combustion controls efficiently; that 2015 and 2016 EPA data show that many EGUs have not been running their post combustion controls as efficiently as they have in the past during the ozone season; and that the EPA should therefore ensure these controls are operating during the 2017 ozone season by including requirements or permit conditions requiring each named EGU to minimize emissions by optimizing existing control technologies, enforced through use of a 30-day rolling average rate.<sup>21</sup>

Maryland also submitted the following documents: A review of its own NO<sub>x</sub> regulations for coal fired EGUs;<sup>22</sup> a detailed study conducted by Maryland and the University of Maryland regarding regional ozone transport research and analysis efforts in Maryland;<sup>23</sup> an August 6, 2015, STI report alleging that source apportionment modeling indicates that emissions from Brunner Island (a source not specifically addressed in Maryland's petition) contribute significantly to ozone formation in Pennsylvania and neighboring states during the modeled ozone season;<sup>24</sup> a list of recommended language for the EPA to include in federal orders related to the named EGUs to remedy significant contribution;<sup>25</sup> and an evaluation of cost savings Maryland alleges the units have incurred in 2014 by not fully running their controls compared with the cost of running their controls at full efficiency.<sup>26</sup> As discussed previously, Maryland also submitted a

memorandum detailing modeling analyses conducted by the University of Maryland, which presents projected reductions in ozone concentrations in Maryland that would occur as a result of optimized SCR and SNCR operations at the 36 sources named in Maryland's petition.<sup>27</sup> Maryland argues that these projected reductions in ozone concentrations at Maryland monitors demonstrate that optimizing the post-combustion controls at the 36 units with SCR or SNCR would allow Maryland to attain, or come very close to attaining, the 2008 8-hour ozone NAAQS.

Additionally, Maryland supplemented its petition with several further appendices submitted in 2017. Maryland submitted an additional optimization analysis comparing NO<sub>x</sub> emissions rates in 2006, 2015, and 2016 for EGUs listed in its petition;<sup>28</sup> a comparison of 2016 ozone season average emissions rates to the lowest demonstrated ozone season average emissions rates between 2005 and 2015 at 369 coal-fired EGUs in 29 states identified as the Eastern Modeling Domain;<sup>29</sup> a comparison of average emissions data at 21 units in Pennsylvania in the first quarter of 2017 to the lowest demonstrated ozone season average emissions rate between 2005–2016;<sup>30</sup> and additional photochemical modeling conducted by the University of Maryland of the impact of the 36 EGUs in the five states on ozone concentrations in Maryland, which concludes that emissions from these units significantly contribute to ozone concentrations in Maryland and therefore contribute to nonattainment and interfere with the maintenance of the 8-hour ozone NAAQS.<sup>31</sup>

Maryland's petition also requests a remedy that will compel the named units to optimize their SCR and SNCR. Maryland indicates that its petition is focused on ensuring controls are run at the units every day of the ozone season. According to Maryland, the CSAPR Update, earlier federal allowance trading programs, and many state regulations allow for longer term averaging, which means that controls do not necessarily need to be run effectively every day to comply with these requirements. Maryland claims that this has resulted in situations where sources in the five upwind states have not run their controls efficiently on many days with high ozone, and, therefore, these sources are impacting

<sup>21</sup> See *id.*

<sup>22</sup> *Id.* Appendix B.

<sup>23</sup> *Id.* Appendix C.

<sup>24</sup> *Id.* Appendix D.

<sup>25</sup> *Id.* Appendix E.

<sup>26</sup> *Id.* Appendix F.

<sup>27</sup> *Id.* Appendix D.

<sup>28</sup> *Id.* Supplemental Appendix A.

<sup>29</sup> *Id.* Supplemental Appendix B.

<sup>30</sup> *Id.* Supplemental Appendix C.

<sup>31</sup> *Id.* Supplemental Appendix D.

<sup>20</sup> Maryland Petition, Appendix A, Part 2, available in the docket for this action.



Maryland in violation of CAA section 110(a)(2)(D)(i)(I). Maryland also claims that, on some of those days, the 36 EGUs in these states emitted in the aggregate over 300 more tons of NO<sub>x</sub> than they would have if they had run their control technologies efficiently. Additionally, Maryland states that these days are often the same days where downwind ozone levels are likely to be highest because of hot, ozone-conducive weather. Maryland supports its claim by alleging that over the entire ozone season, the relief requested in its petition could result in very large reductions. Maryland contends that in 2015, approximately 39,000 tons of NO<sub>x</sub> reductions could have been achieved in the ozone season if the 36 targeted EGUs had simply run their controls efficiently. Therefore, Maryland states that, based on the EPA's past approaches in establishing significant contributions based on highly cost-effective controls, the NO<sub>x</sub> emissions from these 36 EGUs must be abated on each day of the ozone season starting in May of 2017.

Maryland contends that emissions at the 36 EGUs can be reduced at reasonable cost, or with potentially no actual new costs to the EGUs at all,<sup>32</sup> because this requested remedy rests on the use of existing control equipment. Maryland suggests two methods to ensure optimized use of controls at these sources. First, Maryland requests that the EPA include language in federal and state regulations or operating permits requiring the owners or operators of the relevant EGUs to use all installed pollution control technology consistent with technological limitations, manufacturers' specifications, good engineering and maintenance practices, and good air pollution control practices. Second, Maryland requests that the EPA enforce this requirement by comparing each unit's maximum 30-day rolling average emissions rate to the unit's lowest reported ozone emissions rate. Maryland also requests that this remedy be implemented by 2017 to help areas in Maryland achieve attainment in time to inform the 2015 ozone NAAQS area designations

#### 1. Subsequent Actions and Correspondence Regarding the Maryland Petition

Consistent with CAA section 307(d), as discussed in Section III.D of this notice, the EPA determined that the 60-day period for responding to Maryland's petition is insufficient for the EPA to complete the necessary technical review, develop an adequate proposal, and allow time for notice and comment, including an opportunity for public hearing, on a proposed finding regarding whether the 36 EGUs identified in the petition significantly contribute to nonattainment or interfere with maintenance of the 2008 ozone NAAQS in Maryland. On January 3, 2017, the EPA published a final rule extending the deadline for acting on Maryland's section 126(b) petition to July 15, 2017.<sup>33</sup>

On May 17, 2017, the MOG submitted a letter asking the EPA to deny Maryland's section 126(b) petition. The MOG argues that all monitors in Maryland are either attaining the 2008 8-hour ozone NAAQS or are very close to attaining the standard, and that modeling indicates that all Maryland monitors will attain the 2008 8-hour ozone NAAQS in 2025. Furthermore, the MOG argues that the CSAPR Update moots Maryland's petition. Finally, the MOG argues that the EPA must assess the impact of international emissions when reviewing a section 126(b) petition. On May 18, 2017, the Indiana Energy Association submitted a letter making similar assertions, and urged the EPA to deny Maryland's section 126(b) petition.

The EPA acknowledges receipt of these letters, and has made them available in the docket for this action. However, the EPA is not responding directly to these letters in this action. Rather, the EPA encourages interested parties to review this proposal and then submit relevant comments during the public comment period.

#### IV. The EPA's Proposed Decision on Delaware's and Maryland's CAA Section 126(b) Petitions

##### A. The EPA's Approach for Granting or Denying CAA Section 126(b) Petitions Regarding the 2008 and 2015 8-Hour Ozone NAAQS

As discussed in Section III.B of this notice, section 126(b) of the CAA provides a mechanism for states and other political subdivisions to seek abatement of pollution in other states that may affect their air quality. However, it does not identify specific

criteria or a specific methodology for the Administrator to apply when deciding whether to make a CAA section 126(b) finding or deny a petition. Therefore, the EPA has discretion to identify relevant criteria and develop a reasonable methodology for determining whether a CAA section 126(b) finding should be made. *See, e.g., Appalachian Power*, 249 F. 3d at 1050 (finding that given section 126(b)'s silence on what it means for a source to violate section 110(a)(2)(D)(i), EPA's approach, if reasonable, is entitled to deference under *Chevron*); *Chevron, U.S.A., Inc. v. NRDC*, 467 U.S. 837, 842–43 (1984); *Smiley v. Citibank*, 517 U.S. 735, 744–45 (1996).

As an initial matter, the EPA's historical approach to evaluating CAA section 126(b) petitions looks first to see whether a petition establishes a sufficient basis for the requested CAA section 126(b) finding. The EPA first evaluates the technical analysis in the petition to see if that analysis, standing alone, is sufficient to support a CAA section 126(b) finding. The EPA focuses on the analysis in the petition because the statute does not require the EPA to conduct an independent technical analysis to evaluate claims made in CAA section 126(b) petitions. The petitioner, thus, bears the burden of establishing, as an initial matter, a technical basis for the specific finding requested. The EPA has no obligation to prepare an analysis to supplement a petition that fails, on its face, to include an initial technical demonstration. Such a petition, or a petition that fails to identify the specific finding requested, can be denied as insufficient. Nonetheless, the EPA has the discretion to conduct independent analyses when helpful in evaluating the basis for a potential CAA section 126(b) finding or developing a remedy if a finding is made. *See e.g.*, 76 FR 19662, 19666 (April 7, 2011) (proposed response to petition from New Jersey regarding SO<sub>2</sub> emissions from the Portland Generating Station); 83 FR 16064, 16070 (April 13, 2018) (final response to petition from Connecticut regarding ozone emissions from the Brunner Island Steam Electric Station). As explained in the following sections, in this instance, given the EPA's concerns with the adequacy of the information submitted as part of the CAA section 126(b) petitions, and the fact that the EPA has previously issued a rulemaking defining and at least partially addressing the same environmental concern that the petitions seek to address, the EPA determined that it was appropriate to conduct an independent analysis to

<sup>32</sup> Although Maryland suggests emissions could potentially be reduced with no actual new costs to the EGUs, Maryland does not provide further information supporting its suggestion that zero-cost reductions may be available. To the contrary, Maryland states that the cost per ton range would be from \$670 to \$1000, depending on whether the SCR systems are in partial operation or totally idled. *See* Maryland Petition Appendix F, available in the docket for this action.

<sup>33</sup> 82 FR 22 (January 3, 2017).

determine whether it should grant or deny the petitions. Such an analysis, however, is not required by the statute and may not be necessary or appropriate in other circumstances.

With respect to the statutory requirements of both section 110(a)(2)(D)(i) and section 126 of the CAA, the EPA has consistently acknowledged that Congress created these provisions as two independent statutory tools to address the problem of interstate pollution transport. *See, e.g.*, 76 FR 69052, 69054 (November 7, 2011).<sup>34</sup> Congress provided two separate statutory processes to address interstate transport without indicating any preference for one over the other, suggesting it viewed either approach as a legitimate means to produce the desired result. While either provision may be applied to address interstate transport, they are also closely linked in that a violation of the prohibition in CAA section 110(a)(2)(D)(i) is a condition precedent for action under CAA section 126(b) and, critically, that significant contribution to nonattainment and interference with maintenance are construed identically for purposes of both provisions (since the identical terms are naturally interpreted as meaning the same thing in the two linked provisions). *See Appalachian Power*, 249 F.3d at 1049–50.

Thus, in addressing a CAA section 126(b) petition that addresses ozone transport, the EPA believes it is appropriate to interpret these ambiguous terms consistent with the EPA's historical approach to evaluating interstate ozone pollution transport under the good neighbor provision, and its interpretation and application of that related provision of the statute. As described in Sections III.A and III.C of this notice, ozone is a regional pollutant and previous EPA analyses and regulatory actions have evaluated the regional interstate ozone transport problem using a four-step regional analytic framework. The EPA most recently applied this four-step framework in the promulgation of the CSAPR Update to address interstate transport with respect to the 2008 ozone NAAQS under CAA section 110(a)(2)(D)(i)(I). Given the specific cross-reference in CAA section 126(b) to the substantive prohibition in CAA section 110(a)(2)(D)(i), the EPA believes any prior findings made under the good

neighbor provision are informative—if not determinative—for a CAA section 126(b) action, and thus the EPA's four-step approach under CAA section 110(a)(2)(D)(i)(I) is also appropriate for evaluating under CAA section 126(b) whether an upwind source or group of sources will significantly contribute to nonattainment or interfere with maintenance of the 2008 8-hour ozone NAAQS in a petitioning downwind state. Because the EPA interprets the statutory phrases “significantly contribute to nonattainment” and “interfere with maintenance,” which appear in both statutory provisions, to mean the same thing in both those contexts, the EPA's decision whether to grant or deny a CAA section 126(b) petition regarding both the 2008 8-hour ozone and 2015 ozone NAAQS depends on: (1) Whether there is a downwind air quality problem in the petitioning state (*i.e.*, step one of the four-step framework); (2) whether the upwind state where the source subject to the petition is located is linked to the downwind air quality problem (*i.e.*, step two); and, (3) if such a linkage exists, whether there are additional highly cost-effective controls achievable at the source(s) named in the CAA section 126(b) petition (*i.e.*, step three).<sup>35</sup> The application of the four-step framework to EPA's analysis of a CAA section 126(b) petition regarding the 2008 ozone NAAQS is appropriate given the EPA has previously interpreted significant contribution and interference with maintenance under CAA section 110(a)(2)(D)(i) under this framework via the CSAPR Update.

Unlike the 2008 ozone NAAQS, the EPA has not to date engaged in a rulemaking action to apply the good neighbor provision for the 2015 ozone NAAQS. However, the EPA has recently released technical information intended to inform states' development of SIPs to address this standard.<sup>36</sup> As part of the memo releasing the technical information, the EPA acknowledged that

<sup>35</sup> As previously discussed, step four comprises of implementing the necessary emission reductions for states that are found to have emissions that significantly contribute to nonattainment or interfere with maintenance of the NAAQS downwind under steps one, two, and three of the framework. If a state is not found to have downwind impacts through the first three steps, step four is simply not reached under the EPA's analysis.

<sup>36</sup> *See* Information on the Interstate Transport State Implementation Plan Submissions for the 2015 Ozone National Ambient Air Quality Standards under Clean Air Act Section 110(a)(2)(D)(i)(I) (March 2018), available in the docket for this proposed action. By operation of statute, SIPs to address the good neighbor provision for the 2015 ozone NAAQS are due in October 2018.

states have flexibility to pursue approaches that may differ from the EPA's historical approach to evaluating interstate transport in developing their SIPs, which are due in October 2018. Nonetheless, the EPA's technical analysis and the potential flexibilities identified in the memo generally followed the basic elements of the EPA's historical four-step framework. Thus, in light of the EPA's discretion to identify relevant criteria and develop a reasonable methodology for determining whether a CAA section 126(b) finding should be made, the EPA continues to evaluate the claims regarding the 2015 ozone NAAQS in Delaware's section 126(b) petitions consistent with the EPA's four-step framework.

The EPA notes that Congress did not specify how the EPA should determine that a major source or group of stationary sources “emits or would emit” any air pollutant in violation of the prohibition of CAA section 110(a)(2)(D)(i)(I) under the terms of section 126(b). Thus, the EPA also believes it is reasonable and appropriate at each step to consider whether the facility “emits or would emit” in light of the facility's current operating conditions. Therefore, the EPA interprets the phrase “emits or would emit” in the context of acting on Delaware's and Maryland's petitions regarding the 2008 and 2015 ozone NAAQS to mean that a source may “emit” in violation of the good neighbor provision if, based on current emissions levels, the upwind state contributes to downwind air quality problems (*i.e.*, steps one and two), and the source may be further controlled through implementation of highly cost-effective controls (*i.e.*, step 3). Similarly, a source “would emit” in violation of the good neighbor provision if, based on reasonably anticipated future emissions levels (accounting for existing conditions), the upwind state contributes to downwind air quality problems (*i.e.*, steps one and two) and the source could be further controlled through implementation of highly cost-effective controls (*i.e.*, step 3). Consistent with this interpretation, the EPA has therefore evaluated, in the following sections, whether the sources cited in the petitions emit or would emit in violation of the good neighbor provision based on both current and future anticipated emissions levels.

In interpreting the phrase “emits or would emit in violation of the prohibition of section [110(a)(2)(D)(i)],” if the EPA or a state has already adopted provisions that eliminate the significant contribution to nonattainment or interference with maintenance of the

<sup>34</sup> Courts have also upheld the EPA's position that CAA sections 110(a)(2)(D)(i) and section 126 are two independent statutory tools to address the same problem of interstate transport. *See GenOn REMA, LLC v. EPA*, 722 F.3d 513, 520–23 (3d Cir. 2013); *Appalachian Power*, 249 F.3d at 1047.

NAAQS in downwind states, then there simply is no violation of the CAA section 110(a)(2)(D)(i)(I) prohibition, and hence no grounds to grant a section 126(b) petition. Put another way, requiring additional reductions would result in eliminating emissions that do not contribute significantly to nonattainment or interfere with maintenance of the NAAQS, an action beyond the scope of the prohibition in CAA section 110(a)(2)(D)(i)(I) and therefore beyond the scope of the EPA's authority to make the requested finding under CAA section 126(b). See *EPA v. EME Homer City Generation, L.P.*, 134 S. Ct. at 1604 n.18, 1608–09 (holding the EPA may not over-control by requiring sources in upwind states to reduce emissions by more than necessary to eliminate significant contribution to nonattainment or interference with maintenance of the NAAQS in downwind states under the good neighbor provision).

Thus, for example, if the EPA has already approved a state's SIP as adequate to meet the requirements of CAA section 110(a)(2)(D)(i)(I), the EPA will not find that a source in that state was emitting in violation of the prohibition of CAA section 110(a)(2)(D)(i)(I) absent new information demonstrating that the SIP is now insufficient to address the prohibition. Similarly, if the EPA has promulgated a FIP that fully addressed the deficiency, the FIP would eliminate emissions that significantly contribute to nonattainment or interfere with maintenance in a downwind state, and, hence, absent new information to the contrary, EPA will not find that sources in the upwind state are emitting or would emit in violation of the CAA section 110(a)(2)(D)(i)(I) prohibition.

The EPA notes that the approval of a SIP or promulgation of a FIP implementing section 110(a)(2)(D)(i)(I) means that a state's emissions are adequately prohibited for the particular set of facts analyzed under approval of a SIP or promulgation of a FIP. If a petitioner produces new data or information showing a different level of contribution or other facts not considered when the SIP or FIP was promulgated, compliance with a SIP or FIP may not be determinative regarding whether the upwind sources would emit in violation of the prohibition of CAA section 110(a)(2)(D)(i)(I). See 64 FR 28250, 28274 n.15 (May 25, 1999); 71 FR 25328, 25336 n.6 (April 28, 2006); *Appalachian Power*, 249 F.3d at 1067 (later developments can provide the basis for another CAA section 126(b) petition). Thus, in circumstances where a SIP or FIP addressing CAA section

110(a)(2)(D)(i)(I) is being implemented, the EPA will evaluate the CAA section 126(b) petition to determine if it raises new information that merits further consideration.

#### B. The EPA's Evaluation of Whether the Petitions Are Sufficient To Support a Section 126(b) Finding

As an initial matter in reviewing a CAA section 126(b) petition, the EPA evaluates the technical analysis in the petition to see if that analysis, standing alone, is sufficient to support the requested CAA section 126(b) findings. In this regard, the EPA has determined that material elements of the analysis provided in Delaware's and Maryland's petitions are technically deficient and, thereby, proposes to deny the petitions, in part, on the basis that the conclusions that the petitions draw are not supported by the petitions' technical assessments.

##### 1. Petitions From Delaware

As discussed in Section IV.A, the EPA interprets the good neighbor provision for purposes of the pending CAA section 126(b) petitions consistent with the EPA's historical four-step framework. With respect to step one of the four-step framework, the EPA began by evaluating Delaware's four petitions to determine if the state identified a downwind air quality problem (nonattainment or maintenance) that may be impacted by ozone transport from other states. EPA conducted this evaluation with regard to both the 2008 and 2015 ozone NAAQS.

*First*, with respect to the 2008 ozone NAAQS, Delaware does not provide sufficient information to indicate that there is a current or expected future downwind air quality problem in the state. While the Delaware petitions identify individual exceedances of the ozone standard in the state between the 2000 and 2016 ozone seasons, this does not necessarily demonstrate that there is a resulting nonattainment or maintenance problem. Ozone NAAQS violations are determined based on the fourth-highest daily maximum ozone concentration, averaged across 3 consecutive years.<sup>37</sup> Thus, individual exceedances at monitors do not by themselves indicate that a state is not attaining or maintaining the NAAQS.

*Second*, with respect to the 2015 ozone NAAQS, Delaware argues that if that NAAQS had been in effect from 2011 through 2016, Delaware monitors would have recorded more exceedances

than they did under the 2008 ozone NAAQS. However, again, the identification of individual exceedances does not speak to whether there are current violations of the standard. Additionally, the EPA evaluates downwind ozone air quality problems for purposes of step one of the four-step framework using modeled future air quality concentrations for a year that considers the relevant attainment deadlines for the NAAQS.<sup>38</sup> This approach is based on the EPA's interpretation of the language in the good neighbor provision indicating that states should prohibit emissions that "will" significantly contribute to nonattainment or interfere with maintenance of the NAAQS. See *North Carolina*, 531 F.3d at 913–914 (affirming as reasonable the EPA's interpretation of "will" to refer to future, projected ozone concentrations). However, the petitions do not provide any analysis indicating that Delaware may be violating or have difficulty maintaining the 2008 or 2015 ozone NAAQS in a future year associated with the relevant attainment dates.

Next, with respect to step two of the four-step framework, material elements of Delaware's analysis regarding the contributions from the Brunner Island, Harrison, Homer City, and Conemaugh EGUs to air quality in Delaware are deficient and, therefore, the conclusions that the petitions draw are not supported by the technical assessment. As noted earlier, all four petitions rely upon air quality modeling that uses 2011 emissions to quantify the contribution from each of the four named sources to locations in Delaware on individual days in 2011. However, 2011 emissions are generally higher than, and therefore not representative of, current or future projected emissions levels at these EGUs and in the rest of the region, which the EPA believes is most relevant to determining whether a source "emits or would emit" in violation of the good neighbor provision.<sup>39</sup> Thus, the 2011 modeling does not provide representative data regarding current or future contributions

<sup>38</sup> 81 FR 74517.

<sup>39</sup> As an example of how emissions have changed between 2011 and a recent historical year, the EPA notes that Pennsylvania's 2017 EGU NO<sub>x</sub> ozone season emissions were 79 percent below 2011 levels. Brunner Island is located in Pennsylvania, and reduced its individual ozone season NO<sub>x</sub> emissions by 88 percent in 2017 relative to 2011 levels. (<https://www.epa.gov/ampd>). Additional emissions data from 2011 and a recent historical year is included in the docket, which also shows that 2011 emissions are generally higher than emissions in recent years. See 2011 to 2017 NO<sub>x</sub> Comparisons, Ozone Season, available in the docket for this action.

<sup>37</sup> See 80 FR 65296 (October 26, 2015) for a detailed explanation of the calculation of the 3-year 8-hour average and the methodology set forth in 40 CFR part 50, appendix U.

from these EGUs. When evaluating a CAA section 126(b) petition, EPA believes it is important to rely on current and relevant data known at the time the agency takes action. Were the EPA to act based on non-representative information solely because it was provided in a petition, that result could be an arbitrary and unreasonable decision by the EPA, and could, for example, impose controls or emissions limitations that are not appropriately tailored to the nature of the problem at the time of the EPA's final action or at the time when such controls or limitations would actually be implemented. This could result in unnecessary over-control (or under-control) of emissions, beyond (or short of) what is required to address the good neighbor provision, in violation of the Supreme Court's holding in *EPA v. EME Homer City Generation, L.P.*, 134 S. Ct. at 1608–09.

Further, the analyses provided by Delaware regarding the alleged impacts of the four sources on downwind air quality includes some information on the frequency and magnitude of ozone impacts, but the information is unclear as to the modeled and/or measured ozone levels on those days.<sup>40</sup> Delaware's Homer City petition identifies modeled contributions from emissions at that upwind source to three downwind monitoring sites in Delaware on July 18, 2011. However, the petition fails to identify whether there were measured and/or modeled exceedances of the ozone NAAQS on this day at those sites. Delaware's Harrison and Brunner Island petitions identify the days, but not the monitoring sites where Delaware claims emissions from these sources contributed above the threshold. Moreover, these two petitions do not provide information on whether the contributions were to ozone values that exceed the ozone NAAQS. Delaware's Conemaugh petition identifies 2011 contributions on days in Delaware that exceeded the 2008 NAAQS, but the

petition does not provide information to show that the contributions above the threshold were predicted at monitoring sites that were exceeding the 2008 or 2015 ozone NAAQS. Accordingly, for the reasons described in this section, Delaware's analysis in its four petitions does not allow the EPA to conclude that there is a current or future nonattainment or maintenance problem in Delaware, and therefore, the EPA cannot determine that emissions from the four sources cited in the petitions are significantly contributing to nonattainment or interfering with maintenance in Delaware with respect to either the 2008 or 2015 ozone NAAQS.

## 2. Petition From Maryland

The EPA has also evaluated and determined that material elements of the analysis provided in Maryland's petition are technically deficient, and, thereby, proposes to deny the petition, in part based on the fact the conclusions that the petition draws are not supported by the technical assessment. As discussed in Section III.E of this notice, Maryland alleges that 36 named sources are operating their post-combustion controls sub-optimally based on a comparison of their lowest observed NO<sub>x</sub> emissions rates between 2005 and 2008, which Maryland describes as the "best" observed emissions rates, to emissions rates from the 2015 and 2016 ozone seasons. Maryland contends that these sources are, therefore, emitting in violation of the prohibition CAA section 110(a)(2)(D)(i)(I) in the absence of a short-term limit that requires that the controls be optimized.

The EPA believes that the petition's assumption about achievable operating rates presents a technical weakness because the lowest historical rate at any particular unit may not be a rate that can be consistently achieved on a continual operating basis for technical reasons. In the CSAPR Update, the EPA analyzed EGU NO<sub>x</sub> reduction potential and corresponding NO<sub>x</sub> ozone season emissions budgets based on NO<sub>x</sub> emissions rates that can be consistently achieved for EGUs with SCRs that were not currently being optimized or which were currently idled at the time of the EPA's analysis.<sup>41</sup> To determine the rate that could be consistently achieved, the EPA evaluated coal-fired EGU NO<sub>x</sub> ozone season emission data from 2009 through 2015 and calculated an average NO<sub>x</sub> ozone season emissions rate across the fleet of coal-fired EGUs with SCR for each of these 7 years. The EPA

considered and rejected the lowest or second lowest ozone season NO<sub>x</sub> rates, because the EPA determined that these rates may reflect new SCR systems and SCR systems all of whose components are new (e.g., due to simultaneous replacement of multiple layers of catalyst rather than routine replacement of a single layer). Data from these new systems are not representative of ongoing achievable NO<sub>x</sub> rates considering that some SCR systems may have some broken-in components and routine maintenance schedules entailing replacement of individual components. Thus, in the CSAPR Update, the EPA determined that the third lowest fleet-wide average coal-fired EGU NO<sub>x</sub> rate for EGUs with operating SCRs is most representative of ongoing, achievable emission rates. The EPA observed in that rule that the third lowest fleet-wide average coal-fired EGU NO<sub>x</sub> rate for EGUs with SCR is 0.10 lbs/mmBtu. 81 FR 74543. Reliance on the lowest historical emissions rate to evaluate the feasibility and cost effectiveness of controls would likely overestimate the emissions reductions and, consequently, underestimate the costs to restart idled or unoptimized controls.<sup>42</sup> Therefore, EPA does not agree with Maryland's conclusion that it is appropriate to identify whether controls are optimized at the EGUs addressed in the petition, and, thus, whether a short-term limit would be necessary, based on the units' lowest observed emissions rates. Thus, the EPA cannot conclude based on Maryland's petition that these sources emit or would emit in violation of CAA section 110(a)(2)(D)(i)(I) for the 2008 ozone NAAQS.

## C. The EPA's Independent Analysis of the CAA Section 126(b) Petitions

As discussed in Section IV.A of this notice, the EPA may decide to conduct independent analyses when helpful in evaluating the basis for a potential CAA section 126(b) finding or developing a remedy if a finding is made. In this

<sup>40</sup> Existing EPA analyses of interstate ozone pollution transport focus on contributions to high ozone days at the downwind receptor in order to evaluate the impact on nonattainment and maintenance at the receptor. For example, in the CSAPR Update modeling, ozone contributions were calculated using data for the days with the highest future year modeled ozone concentrations. For the 2008 ozone NAAQS, only the highest measured ozone days from each year are considered for the calculation of ozone design values (the values that determine whether there is a measured NAAQS violation). Therefore, measured ozone values that are far below the level of the NAAQS do not cause an exceedance or violation of the NAAQS. For this reason, only ozone contributions to days that are among the highest modeled ozone days at the receptor are relevant to determining if a state or source is linked to downwind nonattainment or maintenance issues.

<sup>41</sup> 81 FR 74543.

<sup>42</sup> Similarly, the method used by Maryland to estimate the input NO<sub>x</sub> emissions rate—i.e., setting the estimated uncontrolled NO<sub>x</sub> rate as a factor of 1 divided by 0.08—is not well supported. In its modeling with IPM, the EPA has used a value of 90 percent reduction in NO<sub>x</sub> emissions to estimate the effect of adding an SCR up to a floor rate limit of 0.07 lb/mmBtu or 0.05 lb/mmBtu depending on coal type (see Table 5–5 in IPM 5.13 documentation available at [https://www.epa.gov/sites/production/files/2015-/documents/chapter\\_5\\_emission\\_control\\_technologies\\_0.pdf](https://www.epa.gov/sites/production/files/2015-/documents/chapter_5_emission_control_technologies_0.pdf)). The reductions results from a combination of simultaneously upgrading combustion controls as well as adding post-combustion controls. Furthermore, Maryland does not provide any supporting argument for its assertion regarding the factor of 0.7 (i.e., 30 percent reduction) to account for low NO<sub>x</sub> burners and other emissions control reductions.

instance, in conducting the independent analyses that it has decided to undertake to evaluate the petitions at issue, the EPA determined that, consistent with the EPA's four-step framework for implementing CAA section 110(a)(2)(D)(i)(I) for the ozone NAAQS, the EPA's decision whether to grant or deny a CAA section 126(b) petition based on the 2008 and 2015 ozone NAAQS depends on whether there is a downwind air quality problem in the petitioning state (*i.e.*, step one of the four-step framework); whether the upwind state where the source subject to the petition is located is linked to the downwind air quality problem (*i.e.*, step two); and, if such a linkage exists, whether, among other factors, there are additional highly cost-effective emissions reductions achievable at the source(s) named in the CAA section 126(b) petition (*i.e.*, step three).

#### 1. The EPA's Step One and Two Analyses for Delaware and Maryland

With regard to the Delaware petitions, while the EPA as discussed in Section IV.B believes that they do not adequately establish the presence of a current or future nonattainment or maintenance problem in Delaware, the EPA also independently examined whether there is an air quality problem under the 2008 and 2015 ozone NAAQS (step one), and whether the states containing the named sources are linked to such a problem in Delaware (step two).

The EPA first looked to air quality modeling projecting ozone concentrations at air quality monitoring sites to 2017, which was conducted for purposes of evaluating the first and second steps of the four-step framework to interstate transport for the 2008 ozone NAAQS as part of the CSAPR Update.<sup>43</sup> The EPA used these projections for air quality monitoring sites and current ozone monitoring data at these sites to identify receptors that were anticipated to have problems attaining or maintaining the 2008 ozone NAAQS in 2017. As noted in Section III.D, all four petitions allege that the EPA's modeling conducted in support of the CSAPR Update shows that the states in which these sources are located contribute one percent or more of the 2008 8-hour ozone NAAQS to ozone concentrations in Delaware and, therefore, that those states' sources are significantly impacting air quality within the state.

However, this modeling indicated that Delaware was not projected to have any nonattainment or maintenance receptors in 2017 with respect to the 2008 ozone NAAQS. Therefore, the modeling in support of the CSAPR Update did not establish that the named states are linked to a downwind air quality problem regarding the 2008 ozone NAAQS. Furthermore, the EPA examined Delaware's 2014–2016 design values, and found that no monitors were violating the 2008 ozone NAAQS. Accordingly, contrary to Delaware's characterization of the EPA's modeling, the EPA did not determine that any states, including those (Pennsylvania and West Virginia) where the sources named in Delaware's petitions are located, will significantly contribute to nonattainment or interfere with maintenance of the 2008 ozone NAAQS in Delaware. Thus, the EPA has no basis to conclude that any of the sources named by Delaware in its petitions are linked to a downwind air quality problem in Delaware with regard to the 2008 ozone NAAQS.

Additionally, the EPA independently examined whether there is a downwind air quality problem in Delaware with regard to the 2015 ozone NAAQS. The modeling conducted in support of the CSAPR Update shows one monitor—monitor ID 100051003 in Sussex County—having a maximum 2017 projected design value above the 2015 ozone NAAQS, and the EPA further notes information indicating that two monitors may exceed the 2015 ozone NAAQS based on the 2014–2016 design values.<sup>44</sup> However, as described in Section IV.B of this notice, the EPA evaluates downwind ozone air quality problems for the purposes of step one of the four-step framework using modeled future air quality concentrations for a year that considers the relevant attainment deadlines for the NAAQS. Recent analyses projecting emissions levels to a future year indicate that no air quality monitors in Delaware are projected to have nonattainment or maintenance problems with respect to the 2015 ozone NAAQS by 2023, which is the last year of ozone season data that will be considered in order to determine whether downwind nonattainment areas classified as moderate have attained the

standard by the relevant 2024 attainment date.<sup>45</sup> Therefore, consistent with the EPA's interpretation of the term “will” in the good neighbor provision discussed in Section IV.B.I., available future year information does not suggest Delaware will have air quality problems by the relevant attainment date for the 2015 ozone NAAQS. The EPA is proposing to determine that the named sources in all four of Delaware's petitions are not in violation of the good neighbor provision with respect to Delaware for the 2008 and 2015 NAAQS based, in part, on the EPA's independent analyses of steps one, two, and three of the four-step framework.

With respect to the Maryland petition, as the state noted in its petition, the EPA already conducted an analysis in the CSAPR Update regarding the impact of the five upwind states named in the state's petition on downwind air quality in Maryland with respect to the 2008 ozone NAAQS. In addition to using modeling to identify downwind air quality problems, the EPA also used air quality modeling to assess contributions from upwind states to these downwind receptors and evaluated these contributions relative to a screening threshold of one percent of the NAAQS. States with contributions that equal or exceed one percent of the NAAQS were identified as warranting further analysis to determine whether they significantly contribute to nonattainment or interfere with maintenance at the downwind receptors. States with contributions below one percent of the NAAQS were considered to not significantly contribute to nonattainment or interfere with maintenance of the NAAQS in downwind states. The EPA determined in the final CSAPR Update that, based on its 2017 modeling projections, statewide emissions from sources in Indiana, Kentucky, Ohio, Pennsylvania, and West Virginia were linked to monitor ID 240251001 in Harford County, Maryland; that monitor was expected to have nonattainment and maintenance problems for the 2008 NAAQS. However, as discussed in Section III.C of this notice, the conclusion that a state's emissions met or exceeded this threshold only indicate that further analysis is appropriate to determine whether any of the upwind state's emissions meet the statutory criteria of significantly contributing to nonattainment or interfering with

<sup>44</sup> See 2016 Design Value Reports, available at <https://www.epa.gov/air-trends/air-quality-design-values#report>. The official designations for these areas and information relied upon for those designations are contained in the EPA's designation actions for the 2015 ozone NAAQS. See 82 FR 54232 (November 16, 2017) and the docket for Additional Air Quality Designations for the 2015 Ozone National Ambient Air Quality Standards, EPA-HQ-OAR-2017-0548, and accompanying technical support documents.

<sup>45</sup> See Supplemental Information on the Interstate Transport State Implementation Plan Submissions for the 2008 Ozone National Ambient Air Quality Standards under Clean Air Act Section 110(a)(2)(D)(i)(I) (October 2017), available in the docket for this proposed action.

<sup>43</sup> Air Quality Modeling Technical Support Document for the Final Cross-State Air Pollution Rule Update, 17 (August 2016). Available at [https://www.epa.gov/sites/production/files/2017-05/documents/air\\_quality\\_modeling\\_tsd\\_final\\_csapr\\_update.pdf](https://www.epa.gov/sites/production/files/2017-05/documents/air_quality_modeling_tsd_final_csapr_update.pdf).

maintenance. The EPA's independent step three analysis of the sources named in Maryland's petition will be discussed in the following sections.

## 2. The EPA's Step Three Analysis With Respect to EGUs Equipped With SCRs Named in Delaware and Maryland's Petitions

The EPA next evaluated whether there are further highly cost-effective NO<sub>x</sub> emissions reductions available at the specific sources named in the petitions, consistent with step three of the framework. As discussed in more detail in Section III.C of this notice, further analysis in step three considers cost, technical feasibility, and air quality factors in a multifactor test to determine whether any emissions deemed to contribute to the downwind air quality factor must be controlled pursuant to the good neighbor provision. The EPA notes that we have already proposed to determine that Delaware's petitions should be denied based on the EPA's conclusions at steps one and two of the four-step framework. Nonetheless, the EPA is also evaluating the EGUs named in the Delaware petitions in this step three analysis because we believe it provides another independent basis for the proposed denial. The EPA is first analyzing this step with respect to those units identified in the Delaware and Maryland petitions equipped with SCR. The EPA will separately address units that are not equipped with SCR later in this section.

Three of Delaware's petitions identify EGUs (Conemaugh, Harrison, and Homer City) that are already equipped with SCRs. Similarly, 32 of the 36 EGUs identified in Maryland's petition are also equipped with SCRs.<sup>46</sup> All of the states in which these EGUs are located are subject to FIPs promulgated as part of the CSAPR Update that require EGUs in each state, including the EGUs named in the petitions, to participate in the CSAPR NO<sub>x</sub> Ozone Season Group 2 allowance trading program, subject to statewide emissions budgets. In establishing the CSAPR Update EGU NO<sub>x</sub> ozone season emissions budgets, the agency quantified the emissions reductions achievable from all NO<sub>x</sub> control strategies that were feasible to

implement within one year<sup>47</sup> and cost-effective at a marginal cost of \$1,400 per ton of NO<sub>x</sub> removed. These EGU NO<sub>x</sub> control strategies were: Optimizing NO<sub>x</sub> removal by existing, operational SCR controls; turning on and optimizing existing idled SCR controls; installing state-of-the-art NO<sub>x</sub> combustion controls; and shifting generation to existing units with lower NO<sub>x</sub> emissions rates within the same state. 81 FR 74541. Thus, the CSAPR Update emissions budgets already reflect emissions reductions associated with the turning on and optimizing of existing SCR controls at the EGUs that are the subject of the petitions, which is the same control strategy identified in the petitions as being both feasible and cost effective. At step three of the four-step framework, therefore, the EPA is proposing to determine that all identified highly cost-effective emissions reductions have already been implemented with respect to these sources, and that they therefore neither emit nor would emit in violation of the good neighbor provision. The EPA proposes to determine that this conclusion is appropriate with regard to both the 2008 ozone NAAQS (addressed in both states' petitions) and the 2015 ozone NAAQS (addressed in the Delaware petitions) because the EPA's determination that the cost-effective control strategy is already being implemented in the context of the allowance trading program, applies regardless of which NAAQS is being addressed. In other words, because the strategy of optimizing existing controls has already been implemented for these sources via the CSAPR Update, there are no additional control strategies identified to further reduce NO<sub>x</sub> emissions at these sources to address the more stringent standard.

Both Delaware and Maryland contend that, based on data available at the time the petitions were filed, the sources are operating their SCR NO<sub>x</sub> emissions controls at low efficiency levels, or are not operating them at all at certain times. Delaware and Maryland therefore ask the EPA to impose unit-specific 30-day emissions rate limits or other requirements to ensure the controls will be continually operated. The EPA notes that the petitions from both states were submitted before the implementation of the emissions budgets promulgated in the CSAPR Update, and the information in the petitions therefore does not represent the most recent data regarding these EGUs' operations. The EPA

analyzed ozone-season emissions rates from all coal-fired units in the contiguous U.S. equipped with SCR and found that, based on 2017 emissions data reflecting implementation of the CSAPR Update, 260 of 274 units had ozone-season emissions rates below 0.2 lb/mmBtu, indicating they were likely operating their post-combustion controls throughout the ozone season, including every unit with SCR named in Delaware's and Maryland's petitions.<sup>48</sup> Five of the 14 units with emissions rates above 0.2 lb/mmBtu are not located in the CSAPR Update region.<sup>49</sup> Consequently, the EPA finds that the named units are consistently operating their SCRs throughout the season.

To the extent the petitions have alleged that short-term limits are necessary to prevent units from turning controls off intermittently on days with high ozone, the EPA examined the hourly NO<sub>x</sub> emissions data reported to the EPA and did not observe many instances of units selectively turning down or turning off their emissions control equipment during hours with high generation.<sup>50</sup> SCR-controlled units generally operated with lower emissions rates on high generation hours, suggesting SCRs generally were in better operating condition—not worse, let alone idling—on those days/hours. In other words, the EPA compared NO<sub>x</sub> rates on hours with high demand and compared them with seasonal average NO<sub>x</sub> rates and found very little difference. The data do not support the notion that units are reducing SCR operation on high demand days to harvest additional power that would otherwise be exhausted on control operation. Moreover, the auxiliary power used for the control operation is small—typically less than one percent of the generation at the facility. The EPA, therefore, concludes that increases in total emissions on days with high generation are a result of additional units coming online and units increasing hourly utilization, rather than units decreasing the functioning of control equipment. The petitions have not presented information that would contradict this conclusion.

Moreover, to the extent that the petitions contend that the allowance

<sup>46</sup> These facilities are located in Indiana (Alcoa Allowance Management Inc., Clifty Creek, Gibson, IPL—Petersburg Generating Station), Kentucky (East Bend Station, Elmer Smith Station, Tennessee Valley Authority Paradise Fossil Plant), Ohio (Killen Station, Kyger Creek, W. H. Zimmer Generating Station), Pennsylvania (Bruce Mansfield, Cheswick, Homer City, Keystone, Montour), and West Virginia (Harrison Power Station, Pleasants Power Station).

<sup>47</sup> The CSAPR Update was signed on September 7, 2016—approximately 8 months before the beginning of the 2017 ozone season on May 1.

<sup>48</sup> As described in the CSAPR Update, optimized operation of combustion controls and SCR typically results in NO<sub>x</sub> emission rates of 0.10 lb/mmBtu or below. Combustion controls alone typically result in rates down to 0.2 lb/mmBtu but can at times achieve results in the range of 0.14 lb/mmBtu. Therefore, units equipped with SCR that have emission rates above 0.2 lb/mmBtu are likely not significantly utilizing their SCR.

<sup>49</sup> See Discussion of Short-term Emission Limits, available in the docket for this action.

<sup>50</sup> *Id.*

trading program is an insufficient means of implementing the emissions reductions associated with the optimized operation of the SCRs at these units, seasonal NO<sub>x</sub> requirements have demonstrated success at reducing peak ozone concentrations. For example, over the past decade, there has been significant improvement in ozone across the eastern U.S., in part due to season-long allowance trading programs.<sup>51</sup> As a result, areas are now attaining the 1997 ozone NAAQS. Further, the EPA notes that the standard is a 3-year average value of three individual seasonal values. Thus, a seasonal program is harmonious with the form of the standard.

### 3. The EPA's Step Three Analysis With Respect to the Named EGUs Equipped With SNCR

Maryland also alleges that two facilities operating SNCR post-combustion controls (SNCR)—Cambria Cogen in Pennsylvania and Grant Town Power Plant in West Virginia—emit or would emit in violation of the good neighbor provision and asks that the agency impose emissions limits or other requirements to ensure that the facilities operate their SNCR during the ozone season.

As discussed earlier in Section IV.C.2 of this notice, the EPA evaluated control strategies in the CSAPR Update that were considered feasible to implement by the 2017 ozone season and determined that EGU control strategies available at a marginal cost of \$1,400 per ton of NO<sub>x</sub> reduced were cost effective. In evaluating and selecting this cost threshold, the EPA also examined other control strategies available at different cost thresholds, including turning on existing idled SNCR, which is the remedy proposed by Maryland in its petition. The EPA identified a marginal cost of \$3,400 per ton as the level of uniform control stringency that represents turning on and fully operating idled SNCR controls.<sup>52</sup> However, the CSAPR Update finalized emissions budgets using \$1,400 per ton control stringency, finding within step 3 of the transport framework that this level of stringency represented the control level at which incremental EGU NO<sub>x</sub> reductions and corresponding downwind ozone air quality improvements were maximized with respect to marginal cost. In finding

that use of the \$1,400 control cost level was appropriate for the 2008 ozone NAAQS, the EPA established that the more stringent emissions budget level reflecting \$3,400 per ton (representing turning on idled SNCR controls) yielded fewer additional emissions reductions and fewer air quality improvements per additional dollar of control costs. In other words, based on the information, assumptions, and analysis in the CSAPR Update, establishing emissions budgets at \$3,400 per ton, and therefore developing budgets based on operation of idled SNCR controls, was not determined to be cost effective for addressing good neighbor provision obligations for the 2008 ozone NAAQS. 81 FR 74550. Maryland has not provided any contradictory information demonstrating that fully operating SNCR is a cost-effective control for these units considering the marginal cost of implementation, the anticipated emissions reduction, the air quality benefits, and the increasing likelihood that other sectors might have more reductions as the cost threshold increases.<sup>53</sup> The EPA is proposing to deny Maryland's petition with respect to these sources based on its conclusion that fully operating with SNCR is not a cost-effective NO<sub>x</sub> emissions reduction strategy with respect to addressing transport obligations for the 2008 ozone NAAQS for these sources, and, therefore, that these sources do not emit and would not emit in violation of the good neighbor provision with respect to the 2008 ozone NAAQS.

While the EPA did not determine that fully operating SNCR across the region was cost effective with respect to addressing transport obligations for the 2008 ozone NAAQS, individual sources may nonetheless choose how to comply with the CSAPR ozone season NO<sub>x</sub> allowance trading program. The operation of existing SNCR controls is one method to achieve emissions reductions needed to comply with the requirements of the trading program. 81 FR 74561. For instance, during the 2017 ozone season, in part as the result of economic incentives under the CSAPR Update, the two Cambria units with SNCR appear to have operated their controls, resulting in average NO<sub>x</sub> emissions rates of 0.15 and 0.16 lbs/

mmBtu, respectively (a drop from the 2016 rates of 0.23 and 0.24 lbs/mmBtu, respectively).<sup>54</sup>

### 4. The EPA's Step Three Analysis With Respect to Brunner Island

The remaining facility addressed in one of Delaware's petitions is the Brunner Island facility, which currently has neither SCR nor SNCR installed. As noted earlier, the EPA has already proposed to determine that Delaware's petitions should be denied based on the EPA's conclusions at steps one and two of the four-step framework. Nonetheless, the EPA has evaluated Brunner Island in this step three analysis because we believe it provides another independent basis for the proposed denial.

With respect to the question of whether there are feasible and highly cost-effective NO<sub>x</sub> emissions reductions available at Brunner Island, the facility primarily burned natural gas with a low NO<sub>x</sub> emissions rate in the 2017 ozone season, and the EPA expects the facility to continue operating primarily by burning natural gas in future ozone seasons. As such, and as described in more detail in the following paragraphs, the EPA at this time finds that no additional feasible and highly cost-effective NO<sub>x</sub> emissions reductions available at Brunner Island have been identified. The EPA, therefore, has no basis to determine, consistent with the standard of review outlined in Section IV.A, that Brunner Island emits or would emit in violation of the good neighbor provision with respect to the 2008 or 2015 ozone NAAQS.

Delaware's CAA section 126(b) petition first proposes that the operation of natural gas is an available highly cost-effective emissions reduction measure that could be implemented at Brunner Island. Brunner Island completed construction of a natural gas pipeline connection prior to the beginning of the 2017 ozone season (*i.e.*, by May 1, 2017) and operated primarily using natural gas as fuel for the 2017 ozone season. As a result, Brunner Island's actual ozone season NO<sub>x</sub> emissions declined from 3,765 tons in 2016 to 877 tons in 2017, and the facility's ozone season NO<sub>x</sub> emissions rate declined from 0.370 lbs/mmBtu in 2016 to 0.090 lbs/mmBtu in 2017. Thus, Brunner Island has already implemented the emissions reductions consistent with what Delaware asserted would qualify as a cost-effective strategy for reducing NO<sub>x</sub> emissions. Accordingly, the EPA has determined that Delaware's CAA section 126(b)

<sup>51</sup> See 81 FR 74521. For further information on national trends in ozone levels, see the EPA ozone trends website, available at <https://www.epa.gov/air-trends/ozone-trends>.

<sup>52</sup> See EGU NO<sub>x</sub> Mitigation Strategies Final Rule TSD (docket ID EPA-HQ-OAR-2015-0500-0554, available at <http://www.regulations.gov>).

<sup>53</sup> Since the EPA does not agree, and Maryland has not demonstrated in the first instance, that the operation of SNCR at these units is cost effective, the EPA need not address Maryland's claim that short-term emission limits may be appropriate. In any event, the EPA notes that the same concerns with relying on the lowest historical emission rate for purposes of determining what is achievable for SCRs, discussed in Section IV.B.2, would also apply to Maryland's contentions with respect to SNCRs.

<sup>54</sup> See 2015, 2016, and 2017 Ozone-Season NO<sub>x</sub> rates (lbs/mmBtu) for 41 units named in the petitions, available in the docket for this action.



petition does not demonstrate that, at this current level of emissions, Brunner Island emits in violation of the good neighbor provision.

Similarly, the EPA concludes that Delaware's petition does not demonstrate that Brunner Island would emit in violation of the good neighbor provision. The EPA believes that Brunner Island will continue to primarily use natural gas as fuel during future ozone seasons for several economic reasons. First, compliance with the CSAPR Update provides an economic incentive to cost-effectively reduce NO<sub>x</sub> emissions. Specifically, Brunner Island's participation in the CSAPR NO<sub>x</sub> Ozone Season Group 2 allowance trading program provides an economic incentive to produce electricity in ways that lower ozone-season NO<sub>x</sub>, such as by burning natural gas relative to burning coal at this particular power plant. Under the CSAPR Update, each ton of NO<sub>x</sub> emitted by a covered EGU has an economic value—either a direct cost in the case that a power plant must purchase an allowance to cover that ton of emissions for CSAPR Update compliance or an opportunity cost in the case that a power plant must use an allowance in its account for compliance and, thereby, foregoes the opportunity to sell that allowance on the market. The EPA notes that Brunner Island's 2017 emissions would have been approximately 2,714 tons more than its actual 2017 emissions if it had operated as a coal-fired generator, as it did in 2016.<sup>55</sup> This reduction in NO<sub>x</sub> emissions that is attributable to primarily burning natural gas has an economic value in the CSAPR allowance trading market.

Second, there are continuing fuel-market based economic incentives suggesting that Brunner Island will continue to primarily burn natural gas during the ozone season. Brunner Island elected to add the capability to primarily utilize natural gas by way of a large capital investment in a new natural gas pipeline capacity connection. Brunner Island's operators would have planned for and constructed this project during the recent period of relatively low natural gas prices. In the years preceding the completion of this natural gas pipeline connection project,

average annual Henry Hub natural gas spot prices ranged from \$2.52/mmBtu to \$4.37/mmBtu (*i.e.*, between 2009 and 2016).<sup>56</sup> The capital expenditure to construct a natural gas pipeline connection suggests that natural gas prices within this range make it economic (*i.e.*, cheaper) for Brunner Island to burn natural gas to generate electricity relative to burning coal. As such, future natural gas prices in this same range suggest that Brunner Island will continue to primarily burn natural gas during future ozone seasons. The EPA and other independent analysts expect future natural gas prices to remain low and within this price range exhibited from 2009 to 2016 due both to supply and distribution pipeline build-out. For example, the Energy Information Administration's (EIA) 2018 Annual Energy Outlook (AEO) natural gas price projections for the Henry Hub spot price range from \$3.06/mmBtu in 2018 to \$3.83/mmBtu in 2023.<sup>57</sup> Moreover, the AEO short-term energy outlook and New York Mercantile Exchange futures further support the estimates of a continued low-cost natural gas supply.<sup>58</sup> These independent analyses of fuel price data and projections lead to the EPA's expectation that fuel-market economics will continue to support Brunner Island's primarily burning natural gas during future ozone seasons through at least 2023.<sup>59</sup>

<sup>56</sup> Henry Hub is a significant distribution hub located on the natural gas pipeline system located in Louisiana. Due to the significant volume of trades at this location, it is seen as the primary benchmark for the North American natural gas market. These data are publicly available at <https://www.eia.gov/dnav/ng/hist/rngwhhdA.htm>.

<sup>57</sup> In the 2018 reference case Annual Energy Outlook (AEO) released February 6, 2018, created by the U.S. Energy Information Administration (EIA), natural gas prices for the power sector for 2018 through 2023. Available at <https://www.eia.gov/outlooks/aeo/data/browser/#/?id=13-AEO2018&cases=ref2018&sourcekey=0>. Projected delivered natural gas prices for the electric power sector in the Middle Atlantic region, where Brunner Island is located, ranged between \$3.56 in 2018 and \$4.08/mmBtu in 2023. The projected delivered coal prices for the electric power sector in the Middle Atlantic region remain relatively constant, ranging from \$2.51 to \$2.56/mmBtu. These data are publicly available at <https://www.eia.gov/outlooks/aeo/data/browser/#/?id=3-AEO2018&region=1-2&cases=ref2018&start=2016&end=2023&f=A&linechart=ref2018-d121317a.3-3-AEO2018.1-2&map=ref2018-d121317a.4-3-AEO2018.1-2&sourcekey=0>.

<sup>58</sup> AEO short-term energy outlook available at <https://www.eia.gov/outlooks/steo/report/natgas.php>.

<sup>59</sup> The EPA also notes that a proposed settlement agreement between Sierra Club and Talen Energy may further ensure that Brunner Island will operate by burning gas in the ozone season in 2023 and future years. Under the settlement, Brunner Island agrees to operate only on natural gas during the ozone season (May 1-September 30) starting on January 1, 2023, (subjected to limited exceptions) and cease coal operations after December 31, 2028.

The context in which Brunner Island installed natural gas-firing capability and burned natural gas is consistent with observed recent trends in natural gas utilization within the power sector, suggesting that Brunner Island's economic situation in which it primarily burns gas as fuel during the ozone season is not unique or limited. Comparing total heat input from 2014 with 2017 for all units that utilize natural gas and report to the EPA's Clean Air Markets Division, historical data showed an increased use of natural gas of 14 percent.<sup>60</sup> This overall increase results from both an increase in capacity from the construction of additional units and an increased gas-fired utilization capacity factor. The available capacity increased six percent while average capacity factor increased from 23 percent to 25 percent, which reflects an eight percent increase in utilization.

Considering the projected continued broader downward trends in NO<sub>x</sub> emissions resulting in improved air quality in Delaware, the EPA anticipates that Brunner Island will likely continue to primarily burn natural gas during the ozone season as air quality in Delaware continues to improve. Accordingly, the EPA has no basis to conclude that the facility would emit in violation of the good neighbor provision with respect to either the 2008 or 2015 ozone NAAQS.

## V. Conclusion

Based on the information discussed in this notice, the EPA is proposing to deny all four of Delaware's CAA section 126(b) petitions, as well as Maryland's CAA section 126(b) petition, on two bases.<sup>61</sup> First, the EPA has described a number of technical deficiencies with these petitions and, therefore, proposes to deny them on the basis that Delaware and Maryland have not met their burden to demonstrate that the named sources emit or would emit in violation of the good neighbor provision with respect to the 2008 ozone NAAQS (in the case of both Delaware and Maryland) or the 2015 ozone NAAQS (with respect to

See a joint statement regarding this agreement, available at <http://talenenergy.investorroom.com/2018-02-14-Joint-Statement-Talen-Energy-and-the-Sierra-Club-Reach-Agreement-on-the-Future-Operation-of-the-Brunner-Island-Power-Plant>. As of the date of this final action, that settlement agreement has not yet been finalized.

<sup>60</sup> From 8.4 billion mmBtu to 9.6 billion mmBtu. See EPA's Clean Air Markets Division data available at <https://ampd.epa.gov/ampd/>.

<sup>61</sup> In this action, note however the EPA is not proposing to determine whether the upwind states identified in any of the CAA section 126(b) petitions have fully addressed their obligation to prohibit emissions activity that contributes significantly to nonattainment in or interference with maintenance by any other state with respect to the 2008 and 2015 ozone NAAQS.

<sup>55</sup> This estimated emissions difference was calculated as the difference between 2017 reported NO<sub>x</sub> emissions of 877 tons and a counterfactual 2017 NO<sub>x</sub> emissions estimate of 3,591 tons created using 2017 operations (*i.e.*, heat input of 19,406,872 mmBtu) multiplied by the 2016 NO<sub>x</sub> emission rate of 0.37 lb/mmBtu reflecting coal-fired generation. These data are publicly available at <https://www.epa.gov/ampd>.

Delaware's petitions). Second, the EPA proposes to determine, based on its own analysis, that all of the petitions fail at one or more steps of the four-step framework. For Delaware under step one, the EPA has determined there are no air quality problems in Delaware in the relevant years for both the 2008 and 2015 ozone NAAQS. The EPA has further evaluated the named sources under step three, finding: (1) That the EPA has already implemented the control strategy identified in the petitions as cost-effective for three facilities (Conemaugh, Harrison, and Homer City) in the CSAPR Update, and (2) that Brunner Island is already operating and is expected to continue operating with natural gas such that the facility has no additional cost-effective and feasible controls available. The EPA is also proposing to deny the Maryland petition because: (1) For those facilities with SCR, the EPA has already implemented the control strategy identified in the petitions as cost-effective, and (2) for the facilities with SNCR, the EPA has already determined that operation of SNCR is not cost-effective with respect to addressing transport obligations for the 2008 ozone NAAQS and therefore is not required by the good neighbor provision with respect to this NAAQS. The EPA requests comment on its proposed denial of Maryland's and Delaware's CAA section 126(b) petitions, including the bases for the decision described herein.

#### VI. Determinations Under Section 307(b)(1)

Section 307(b)(1) of the CAA indicates which Federal Courts of Appeal have venue for petitions of review of final actions by EPA. This section provides, in part, that petitions for review must be filed in the Court of Appeals for the District of Columbia Circuit if (i) the agency action consists of "nationally applicable regulations promulgated, or final action taken, by the Administrator," or (ii) such action is locally or regionally applicable, if "such action is based on a determination of nationwide scope or effect and if in taking such action the Administrator finds and publishes that such action is based on such a determination."

The EPA proposes to find that any final action regarding these pending section 126(b) petitions is "nationally applicable" or, in the alternative, is based on a determination of "nationwide scope and effect" within the meaning of section 307(b)(1). Through this rulemaking action, the EPA interprets sections 110 and 126 of the CAA, statutory provisions which

apply to all states and territories in the United States. In addition, the proposed action addresses emissions impacts and sources located in seven States, which are located in multiple EPA Regions and federal circuits. The proposed action is also based on a common core of factual findings and analyses concerning the transport of pollutants between the different states. Furthermore, the EPA intends this interpretation and approach to be consistently implemented nationwide with respect to section 126(b) petitions for the 2008 and 2015 ozone NAAQS. Courts have found similar actions to be nationally applicable.<sup>62</sup> Additionally, in the report on the 1977 Amendments that revised section 307(b)(1) of the CAA, Congress noted that the Administrator's determination that an action is of "nationwide scope or effect" would be appropriate for any action that has a scope or effect beyond a single judicial circuit. H.R. Rep. No. 95-294 at 323, 324, reprinted in 1977 U.S.C.C.A.N. 1402-03. For these reasons, the Administrator proposes to determine that any final action related to this proposal is nationally applicable or, in the alternative, is based on a determination of nationwide scope and effect for purposes of section 307(b)(1).

Thus, the EPA proposes that pursuant to section 307(b)(1) any petitions for review of any final actions regarding the rulemaking would be filed in the Court of Appeals for the District of Columbia Circuit within 60 days from the date any final action is published in the **Federal Register**.

#### VII. Statutory Authority

42 U.S.C. 7410, 7426, 7601.

Dated: May 31, 2018.

**E. Scott Pruitt,**

*Administrator.*

[FR Doc. 2018-12374 Filed 6-7-18; 8:45 am]

**BILLING CODE 6560-50-P**

#### ENVIRONMENTAL PROTECTION AGENCY

[EPA-HQ-OAR-2018-0295; FRL-9979-19-OAR]

RIN 2060-AT40, 2060-AT39, 2060-AT38, 2060-AT37, 2060-AT36

#### Response to Clean Air Act Section 126(b) Petitions From Delaware and Maryland

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Notice of public hearing.

**SUMMARY:** The Environmental Protection Agency (EPA) is announcing that a public hearing will be held on the EPA's proposed response to petitions from Delaware and Maryland pursuant to section 126 of the Clean Air Act (CAA or Act). The EPA is proposing to deny four CAA section 126(b) petitions submitted by the state of Delaware and one CAA section 126(b) petition submitted by the state of Maryland between July and November 2016. The hearing will be held on June 22, 2018, in Washington, DC.

**DATES:** The public hearing will be held on June 22, 2018, in Washington, DC.

Please refer to **SUPPLEMENTARY INFORMATION** for additional information on the public hearing.

#### ADDRESSES:

*Public Hearing.* The June 22, 2018, public hearing will be held at the EPA, William Jefferson Clinton East Building, Room 1153, 1201 Constitution Avenue NW, Washington, DC 20004.

Identification is required. If your driver's license is issued by America Samoa, you must present an additional form of identification to enter (*see*

**SUPPLEMENTARY INFORMATION** for additional information on this location).

*Docket:* All documents in the docket are listed in the <http://www.regulations.gov> index. Although listed in the index, some information is not publicly available, e.g., Confidential Business Information or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, will be publicly available only in hard copy. Publicly available docket materials are available either electronically in <http://www.regulations.gov> or in hard copy at EPA Docket Center Reading Room, William Jefferson Clinton West Building, 1301 Constitution Avenue NW, Washington, DC 20004. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The phone

<sup>62</sup> See, e.g., *Texas v. EPA*, 2011 U.S. App. LEXIS 5654 (5th Cir. 2011) (finding SIP call to 13 states to be nationally applicable and thus transferring the case to the U.S. Court of Appeals for the D.C. Circuit in accordance with CAA section 307(b)(1)).